

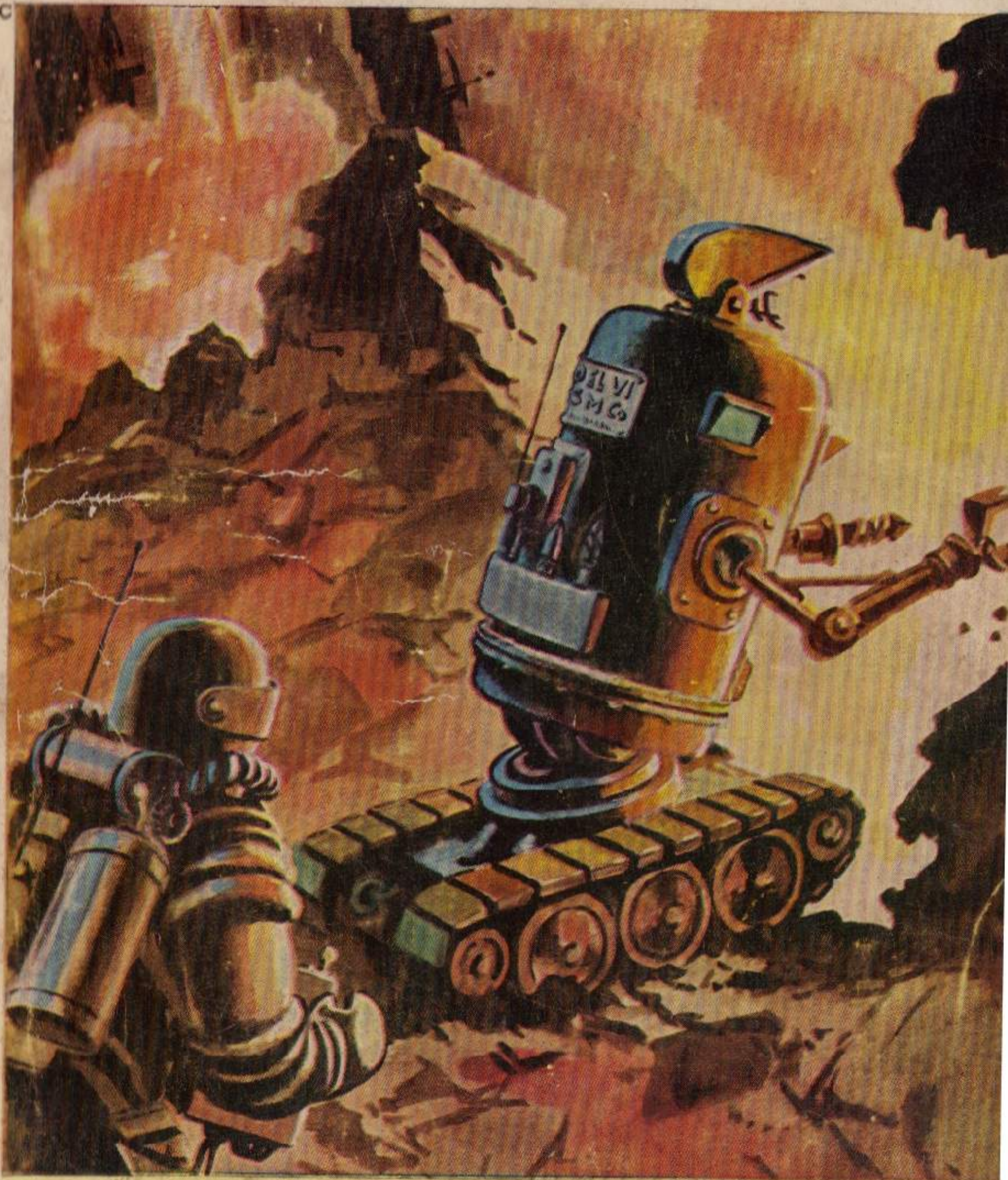
Galaxy

SCIENCE FICTION

JULY 1952

35¢

AND



WHEN WILL WORLDS COLLIDE? By WILLY LE



Galaxy publishing corporation
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Dear Galaxy Reader:

This is the first chance I've had to write you since becoming publisher of GALAXY last fall. And because so many thousands of you get your copies on news stands it is only by taking away one of our usual advertising pages that I can reach you.

There are many things to tell you about Galaxy. First, we have been making tremendous efforts to improve Galaxy. We have been combing the literary woods for the very best stories in this field.

We have set up an efficient service department so that our subscribers and readers can get exactly what they request and so that back copy orders can be filled with a minimum of delay. We have been adding features and departments that we believe you will find of great interest, such as the articles by Willey Ley. By the way, have you noticed our new covers?

All of our efforts are meant to increase your enjoyment of Galaxy (and increase our sales). We hope we are succeeding but even more important is knowing whether you think so. Are we missing the mark, are we getting better and how do you think we can still get better--these are the most important things for us. We'd like to hear from you and we assure you that every single letter will be carefully studied. Now or any time in the future we hope you'll write to us anytime you have anything to say about Galaxy.

You have our most sincere appreciation for your support and our promise to always strive to make Galaxy live up to the title given us last year by LIFE MAGAZINE, when they called us the "Aristocrat of Science Fiction Magazines".

Cordially yours,

Robert M. Guinn
Publisher

Galaxy

SCIENCE FICTION

ALL ORIGINAL STORIES
NO REPRINTS!

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JULY, 1952

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WONDERMENT

EDITING a science fiction magazine makes you examine problems, situations and attitudes from every possible angle. The result is that truth comes to have many sides; problems and situations can be solved in a variety of ways—and each one produces its own new set of difficulties.

If you read *The Quest for Utopia*, an anthology of imaginary societies edited by Glenn Negley and J. Max Patrick (Henry Schuman, Inc., New York, 1952; 608 pages, \$6.75), you'll find two basic characteristics in all Utopias:

They seemed highly desirable in the eras in which they were produced, but, from the vantage point of history, we can find little to choose between them and the reality of their day.

Every Utopia relentlessly excludes whole segments of the population, being designed only for its creator and his pals.

Since that's the case, there is almost an infinite number of possible Utopias. The ideal society for an entrepreneur, as in *Gravy Planet*, is obviously not the same as that of a socialist or a hobo. Extend that to generals, enlisted men, gamblers, reformers, religionists and atheists, high society

and recluses—each social group has its own dream world.

The Quest for Utopia is evidence of that. It has rescued a number of important works from the obscurity of foreign languages and special reading rooms in libraries. As a record of changes in goals through history, it has great fascination. "Human nature" is too indeterminate a term, so there's no point discussing whether it can change, but the book makes completely visible the fact that people in different ages and social classes have very different ideals.

Here's another wonderment:

Like all readers of science fiction, I suppose, I've been irritated by some reviewers' dismissal of it as "escape literature." The implication, of course, is that their own favorite forms of literature are nothing of the sort.

Psychologically, anything that allows a person to avoid his internal conflicts is escapist. That covers every human activity: work, eating and sleeping, creation and recreation and procreation.

There's no doubt that some writers and readers overcommit themselves to science fiction, living it instead of their actual lives. But that's characteristic of them,

not of science fiction. Stating the opposite is the same as blaming food for making people fat, sleep for making them lazy, or work because it makes them neglect their families.

Any human need, desire or activity may be put to escapist uses . . . including the writing of literary reviews. In some instances, reviewing masks a deep feeling of artistic sterility. Some instances, please note; not all, by any means.

Good reviewing serves an important purpose. So does escape. Not only is it destructive to keep obsessively facing internal problems, but no other work would get done. And escape has produced every significant advance in civilization.

Science fiction has already contributed its share. It will go on doing so.

Another thing:

We usually view the future as a fairly straight-line development of the present. But it doesn't take much examination of the past to see that history is more like a fox's trail than a curve on a graph. Examples? Here:

- After the rigid conservatism of the Middle Ages came the flamboyant romanticism of the Renaissance.

- The humanist and rationalist philosophy of the 18th century was replaced by the blunt ma-

terialism of the 19th century.

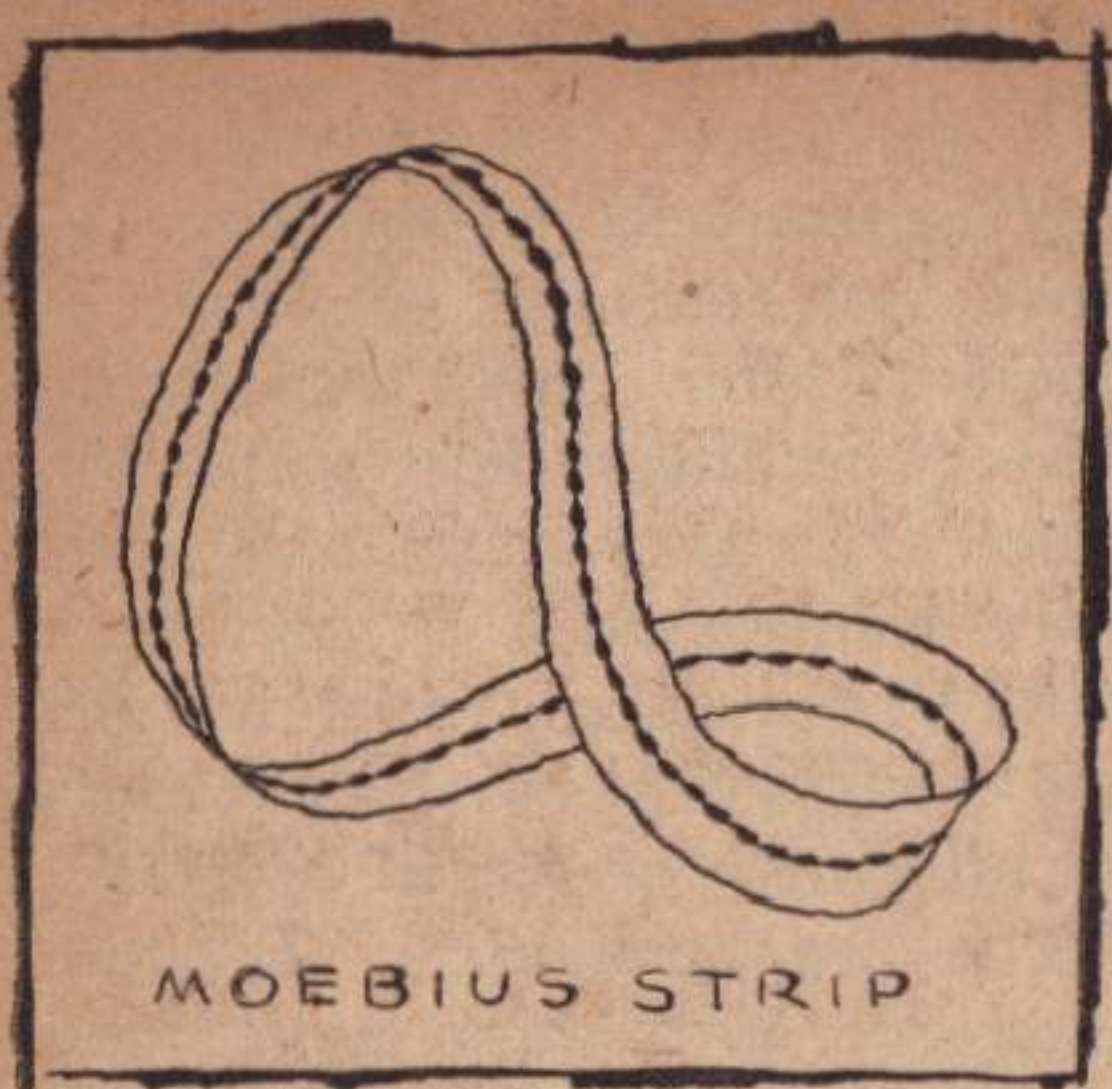
- A period of lax morality always seems to be followed by intense puritanism. Women in France, after the Napoleonic Wars, wore single sheer garments, which they soaked to make still more transparent . . . and then came Victorianism, which in turn was swept away by the gin-and-sex aftermath of World War I.

- The egalitarianism of the American Revolution gave way to the Alien & Sedition Act, and I don't have to explain what happened after the Russian Revolution. These reversals seem typical of such upheavals.

- We appear to be going into a modified sort of Victorian era, as exemplified by trends in clothes and growing censorship of literature. There generally are lags, of course, which would explain beachwear and *From Here to Eternity*. A parallel in the 19th century was the astonishingly low-cut gowns, and another was Eugene Field, who turned out some of the best scatoliterature.

Every social action evidently produces an equal and opposite reaction. Society ultimately gets where it's heading, but by doubling back constantly; thus far, almost always on a higher level. That's not as tidy as a graph, but history never is except in retrospect.

—H. L. GOLD



Star, Bright

By MARK CLIFTON

There is no past or future, the children said;

it all just is! They had every reason to know!

Friday—June 11th

AT three years of age, a little girl shouldn't have enough functioning intelligence to cut out and paste together a Moebius Strip.

Or, if she did it by accident, she surely shouldn't have enough reasoning ability to pick up one of her crayons and carefully trace the continuous line to prove it has only one surface.

Illustrated by DAVID STONE

And if by some strange coincidence she did, and it was still just an accident, how can I account for this generally active daughter of mine—and I do mean *active*—sitting for a solid half hour with her chin cupped in her hand, staring off into space, thinking with such concentration that it was almost painful to watch?

I was in my reading chair, going over some work. Star was sitting on the floor, in the circle of my light, with her blunt-nosed scissors and her scraps of paper.

Her long silence made me glance down at her as she was taping the two ends of the paper together. At that point I thought it was an accident that she had given a half twist to the paper strip before joining the circle. I smiled to myself as she picked it up in her chubby fingers.

"A little child forms the enigma of the ages," I mused.

But instead of throwing the strip aside, or tearing it apart as any other child would do, she carefully turned it over and around — studying it from all sides.

Then she picked up one of her crayons and began tracing the line. She did it as though she were substantiating a conclusion already reached!

It was a bitter confirmation for me. I had been refusing to

face it for a long time, but I could ignore it no longer.

Star was a High I.Q.

For half an hour I watched her while she sat on the floor, one knee bent under her, her chin in her hand, unmoving. Her eyes were wide with wonderment, looking into the potentialities of the phenomenon she had found.

It has been a tough struggle, taking care of her since my wife's death. Now this added problem. If only she could have been normally dull, like other children!

I made up my mind while I watched her. If a child is afflicted, then let's face it, she's afflicted. A parent must teach her to compensate. At least she could be prepared for the bitterness I'd known. She could learn early to take it in stride.

I could use the measurements available, get the degree of intelligence, and in that way grasp the extent of my problem. A twenty point jump in I.Q. creates an entirely different set of problems. The 140 child lives in a world nothing at all like that of the 100 child, and a world which the 120 child can but vaguely sense. The problems which vex and challenge the 160 pass over the 140 as a bird flies over a field mouse. I must not make the mistake of posing the problems of one if she is the other. I must know. In

the meantime, I must treat it casually.

"That's called the Moebius Strip, Star," I interrupted her thoughts.

She came out of her reverie with a start. I didn't like the quick way her eyes sought mine—almost furtively, as though she had been caught doing something bad.

"Somebody already make it?" she disappointedly asked.

She knew what she had discovered! Something inside me spilled over with grief, and something else caught at me with dread.

I kept my voice casual. "A man by the name of Moebius. A long time ago. I'll tell you about him sometime when you're older."

"Now. While I'm little," she commanded with a frown. "And don't tell. Read me."

What did she mean by that? Oh, she must be simply paraphrasing me at those times in the past when I've wanted the facts and not garbled generalizations. It could only be that!

"Okay, young lady." I lifted an eyebrow and glared at her in mock ferociousness, which usually sent her into gales of laughter. "I'll slow you down!"

She remained completely sober.

I turned to the subject in a physics book. It's not in simple language, by any means, and I

read it as rapidly as I could speak. My thought was to make her admit she didn't understand it, so I could translate it into basic language.

Her reaction?

"You read too slow, Daddy," she complained. She was childishly irritable about it. "You say a word. Then I think a long time. Then you say another word."

I knew what she meant. I remember, when I was a child, my thoughts used to dart in and out among the slowly droning words of any adult. Whole patterns of universes would appear and disappear in those brief moments.

"So?" I asked.

"So," she mocked me impishly. "You teach me to read. Then I can think quick as I want."

"Quickly," I corrected in a weak voice. "The word is 'quickly,' an adverb."

She looked at me impatiently, as if she saw through this allegedly adult device to show up a younger's ignorance. I felt like the dope!

September 1st

A GREAT deal has happened the past few months. I have tried a number of times to bring the conversation around to discuss Star's affliction with her. But she is amazingly adroit at heading me off, as though she already knows what I am trying to say

and isn't concerned. Perhaps, in spite of her brilliance, she's too young to realize the hostility of the world toward intelligence.

Some of the visiting neighbors have been amused to see her sit on the floor with an encyclopedia as big as she is, rapidly turning the pages. Only Star and I know she is reading the pages as rapidly as she can turn them. I've brushed away the neighbors' comments with: "She likes to look at the pictures."

They talk to her in baby talk—and she answers in baby talk! How does she know enough to do that?

I have spent the months making an exhaustive record of her I.Q. measurements, aptitude speeds, reaction, tables, all the recommended paraphernalia for measuring something we know nothing about.

The tables are screwy, or Star is beyond all measurement.

All right, Pete Holmes, how are you going to pose those problems and combat them for her, when you have no conception of what they might be? But I must have a conception. I've got to be able to comprehend at least a little of what she may face. I simply couldn't stand by and do nothing.

Easy, though. Nobody knows better than you the futility of trying to compete out of your class. How many students, workers and

employers have tried to compete with you? You've watched them and pitied them, comparing them to a donkey trying to run the Kentucky Derby.

How does it feel to be in the place of the donkey, for a change? You've always blamed them for not realizing they shouldn't try to compete.

But this is my own daughter! I *must* understand.

October 1st

STAR is now four years old, and according to State Law her mind has now developed enough so that she may attend nursery school. Again I tried to prepare her for what she might face. She listened through about two sentences and changed the subject. I can't tell about Star. Does she already know the answers? Or does she not even realize there is a problem?

I was in a sweat of worry when I took her to her first day at school yesterday morning. Last night I was sitting in my chair, reading. After she had put her dolls away, she went to the bookshelves and brought down a book of fairy tales.

That is another peculiarity of hers. She has an unmeasurably quick perception, yet she has all the normal reactions of a little girl. She likes her dolls, fairy stories, playing grown up. No,

she's not a monster.

She brought the book of fairy tales over to me.

"Daddy, read me a story," she asked quite seriously.

I looked at her in amazement. "Since when? Go read your own story."

She lifted an eyebrow in imitation of my own characteristic gesture.

"Children of my age do not read," she instructed pedantically. "I can't learn to read until I am in the first grade. It is very hard to do and I am much too little."

She had found the answer to her affliction — conformity! She had already learned to conceal her intelligence. So many of us break our hearts before we learn that.

But you don't have to conceal it from me, Star! Not from me!

Oh, well, I could go along with the gag, if that was what she wanted.

"Did you like nursery school?" I asked the standard question.

"Oh, yes," she exclaimed enthusiastically. "It was fun."

"And what did you learn today, little girl?"

She played it straight back to me. "Not much. I tried to cut out paper dolls, but the scissors kept slipping." Was there an elfin deviltry back of her sober expression?

"Now, look," I cautioned, "don't overdo it. That's as bad

as being too quick. The idea is that everybody has to be just about standard average. That's the only thing we will tolerate. It is expected that a little girl of four should know how to cut out paper dolls properly."

"Oh?" she questioned, and looked thoughtful. "I guess that's the hard part, isn't it, Daddy—to know how much you ought to know?"

"Yes, that's the hard part," I agreed fervently.

"But it's all right," she reassured me. "One of the Stupids showed me how to cut them out, so now that little girl likes me. She just took charge of me then and told the other kids they should like me, too. So of course they did because she's leader. I think I did right, after all."

"Oh, no!" I breathed to myself. She knew how to manipulate other people already. Then my thought whirled around another concept. It was the first time she had verbally classified normal people as "Stupids," but it had slipped out so easily that I knew she'd been thinking to herself for a long time. Then my whirling thoughts hit a third implication.

"Yes, maybe it was the right thing," I conceded. "Where the little girl was concerned, that is. But don't forget you were being observed by a grownup teacher in the room. And she's smarter."

"You mean she's older, Daddy," Star corrected me.

"Smarter, too, maybe. You can't tell."

"I can," she sighed. "She's just older."

I think it was growing fear which made me defensive.

"That's good," I said emphatically. "That's very good. You can learn a lot from her then. It takes an awful lot of study to learn how to be stupid."

My own troublesome business life came to mind and I thought to myself, "I sometimes think I'll never learn it."

I swear I didn't say it aloud. But Star patted me consolingly and answered as though I'd spoken.

"That's because you're only fairly bright, Daddy. You're a Tween, and that's harder than being really bright."

"A Tween? What's a Tween?" I was bumbling to hide my confusion.

"That's what I mean, Daddy," she answered in exasperation. "You don't grasp quickly. An In Between, of course. The other people are Stupids, I'm a Bright, and you're a Tween. I made those names up when I was little."

Good God! Besides being unmeasurably bright, she's a telepath!

All right, Pete, there you are. On reasoning processes you might

stand a chance—but not telepathy!

"Star," I said on impulse, "can you read people's minds?"

"Of course, Daddy," she answered, as if I'd asked a foolishly obvious question.

"Can you teach me?"

She looked at me impishly. "You're already learning it a little. But you're so slow! You see, you didn't even know you were learning."

Her voice took on a wistful note, a tone of loneliness.

"I wish—" she said, and paused.

"What do you wish?"

"You see what I mean, Daddy? You try, but you're so slow."

All the same, I knew. I knew she was already longing for a companion whose mind could match her own.

A father is prepared to lose his daughter eventually, Star, but not so soon.

Not so soon . . .

June, again

SOME new people have moved in next door. Star says their name is Howell. Bill and Ruth Howell. They have a son, Robert, who looks maybe a year older than Star, who will soon be five.

Star seems to have taken up with Robert right away. He is a well-mannered boy and good company for Star.

I'm worried, though. Star had something to do with their moving in next door. I'm convinced of that. I'm also convinced, even from the little I've seen of him, that Robert is a Bright and a telepath.

Could it be that, failing to find quick accord with my mind, Star has reached out and out until she made contact with a telepath companion?

No, that's too fantastic. Even if it were so, how could she shape circumstances so she could bring Robert to live next door to her? The Howells came from another city. It just happened that the people who lived next door moved out and the house was put up for sale.

Just happened? How frequently do we find such abnormal Brights? What are the chances of one *just happening* to move in next door to another?

I know he is a telepath because, as I write this, I sense him reading it.

I even catch his thought: "Oh, pardon me, Mr. Holmes. I didn't intend to peek. Really I didn't."

Did I imagine that? Or is Star building a skill in my mind?

"It isn't nice to look into another person's mind unless you're asked, Robert," I thought back, rather severely. It was purely an experiment.

"I know it, Mr. Holmes. I

apologize." He is in his bed in his house, across the driveway.

"No, Daddy, he really didn't mean to." And Star is in her bed in this house.

It is impossible to write how I feel. There comes a time when words are empty husks. But mixed with my expectant dread is a thread of gratitude for having been taught to be even stumblingly telepathic.

Saturday—August 11th

I'VE thought of a gag. I haven't seen Jim Pietre in a month of Sundays, not since he was awarded that research fellowship with the museum. It will be good to pull him out of his hole, and this little piece of advertising junk Star dropped should be just the thing.

Strange about the gadget. The Awful Secret Talisman of the Mystic Junior G-Men, no doubt. Still, it doesn't have anything about crackles and pops printed on it. Merely an odd-looking coin, not even true round, bronze by the look of it. Crude. They must stamp them out by the million without ever changing a die.

But it is just the thing to send to Jim to get a rise out of him. He could always appreciate a good practical joke. Wonder how he'd feel to know he was only a Tween.

Monday—August 13th
SITTING here at my study desk, I've been staring into space for an hour. I don't know what to think.

It was about noon today when Jim Pietre called the office on the phone.

"Now, look, Pete," he started out. "What kind of gag are you pulling?"

I chortled to myself and pulled the dead pan on him.

"What do you mean, boy?" I asked back into the phone. "Gag? What kind of gag? What are you talking about?"

"A coin. A coin." He was impatient. "You remember you sent me a coin in the mail?"

"Oh, yeah, that," I pretended to remember. "Look, you're an important research analyst on metals—too damned important to keep in touch with your old friends—so I thought I'd make a bid for your attention thataway."

"All right, give," he said in a low voice. "Where did you get it?" He was serious.

"Come off it, Jim. Are you practicing to be a stuffed shirt? I admit it's a rib. Something Star dropped the other day. A manufacturer's idea of kid advertising, no doubt."

"I'm in dead earnest, Peter," he answered. "It's no advertising gadget."

"It means something?"

In college, Jim could take a practical joke and make six out of it.

"I don't know what it means. Where did Star get it?" He was being pretty crisp about it.

"Oh, I don't know," I said. I was getting a little fed up; the joke wasn't going according to plan. "Never asked her. You know how kids clutter up the place with their things. No father even tries to keep track of all the junk that can be bought with three box tops and a dime."

"This was not bought with three box tops and a dime," he spaced his words evenly. "This was not bought anywhere, for any price. In fact, if you want to be logical about it, this coin doesn't exist at all."

I laughed out loud. This was more like the old Jim.

"Okay, so you've turned the gag back on me. Let's call it quits. How about coming over to supper some night soon?"

"I'm coming over, my friend." He remained grim as he said it. "And I'm coming over tonight. As soon as you will be home. It's no gag I'm pulling. Can you get that through your stubborn head? You say you got it from Star, and of course I believe you. But it's no toy. It's the real thing." Then, as if in profound puzzlement, "Only it isn't."

A feeling of dread was settling

upon me. Once you cried "Uncle" to Jim, he always let up.

"Suppose you tell me what you mean," I answered soberly.

"That's more like it, Pete. Here's what we know about the coin so far. It is apparently pre-Egyptian. It's hand-cast. It's made out of one of the lost bronzes. We fix it at around four thousand years old."

"That ought to be easy to solve," I argued. "Probably some coin collector is screaming all over the place for it. No doubt lost it and Star found it. Must be lots of old coins like that in museums and in private collections."

I was rationalizing more for my own benefit than for Jim. He



would know all those things without my mentioning them. He waited until I had finished.

"Step two," he went on. "We've got one of the top coin men in the world here at the museum. As soon as I saw what the metal was, I took it to him. Now hold onto your chair, Pete. He says there is no coin like it in the world, either museum or private collection."

"You museum boys get beside yourselves at times. Come down to Earth. Sometime, somewhere, some collector picked it up in some exotic place and kept it quiet. I don't have to tell you how some collectors are—sitting in a dark room, gloating over some worthless bauble, not telling a soul about it—"

"All right, wise guy," he interrupted. "Step three. That coin is at least four thousand years old *and it's also brand-new!* Let's hear you explain that away."

"New?" I asked weakly. "I don't get it."

"Old coins show wear. The edges get rounded with handling. The surface oxidizes. The molecular structure changes, crystallizes. This coin shows no wear, no oxidation, no molecular change. This coin might have been struck yesterday. *Where did Star get it?*"

"Hold it a minute," I pleaded.

I began to think back. Saturday morning. Star and Robert had been playing a game. Come to think of it, that was a peculiar game. Mighty peculiar.

Star would run into the house and stand in front of the encyclopedia shelf. I could hear Robert counting loudly at the base tree outside in the back yard. She would stare at the encyclopedia for a moment.

Once I heard her mumble: "That's a good place."

Or maybe she merely thought it and I caught the thought. I'm doing that quite a bit of late.

Then she would run outside again. A moment later, Robert would run in and stand in front of the same shelf. Then he also would run outside again. There

would be silence for several minutes. The silence would rupture with a burst of laughing and shouting. Soon, Star would come in again.

"How does he find me?" I heard her think once. "I can't reason it, and I can't ESP it out of him."

It was during one of their silences when Ruth called over to me.



"Hey, Pete! Do you know where the kids are? Time for their milk and cookies."

The Howells are awfully good to Star, bless 'em. I got up and went over to the window.

"I don't know, Ruth," I called back. "They were in and out only a few minutes ago."

"Well, I'm not worried," she

said. She came through the kitchen door and stood on the back steps. "They know better than to cross the street by themselves. They're too little for that. So I guess they're over at Marily's. When they come back, tell 'em to come and get it."

"Okay, Ruth," I answered.

She opened the screen door again and went back into her kitchen. I left the window and returned to my work.

A little later, both the kids came running into the house. I managed to capture them long enough to tell them about the cookies and milk.

"Beat you there!" Robert shouted to Star.

There was a scuffle and they ran out the front door. I noticed then that Star had dropped the coin and I picked it up and sent it to Jim Pietre.

"HELLO, Jim," I said into the phone. "Are you still there?"

"Yep, still waiting for an answer," he said.

"Jim, I think you'd better come over to the house right away. I'll leave my office now and meet you there. Can you get away?"

"Can I get away?" he exclaimed. "Boss says to trace this coin down and do nothing else. See you in fifteen minutes."

He hung up. Thoughtfully, I

replaced the receiver and went out to my car. I was pulling into my block from one arterial when I saw Jim's car pulling in from a block away. I stopped at the curb and waited for him. I didn't see the kids anywhere out front.

Jim climbed out of his car, and I never saw such an eager look of anticipation on a man's face before. I didn't realize I was showing my dread, but when he saw my face, he became serious.

"What is it, Pete? What on Earth is it?" he almost whispered.

"I don't know. At least I'm not sure. Come on inside the house."

We let ourselves in the front, and I took Jim into the study. It has a large window opening on the back garden, and the scene was very clear.

At first it was an innocent scene—so innocent and peaceful. Just three little children in the back yard playing hide and seek. Marily, a neighbor's child, was stepping up to the base tree.

"Now look, you kids," she was saying. "You hide where I can find you or I won't play."

"But where can we go, Marily?" Robert was arguing loudly. Like all little boys, he seems to carry on his conversations at the top of his lungs. "There's the garage, and there's those trees and bushes. You have to look everywhere, Marily."

"And there's going to be other

buildings and trees and bushes there afterward," Star called out with glee. "You gotta look behind them, too."

"Yeah!" Robert took up the teasing refrain. "And there's been lots and lots of buildings and trees there before — especially trees. You gotta look behind them, too."

Marily tossed her head petulantly. "I don't know what you're talking about, and I don't care. Just hide where I can find you, that's all."

She hid her face at the tree and started counting. If I had been alone, I would have been sure my eyesight had failed me, or that I was the victim of hallucinations. But Jim was standing there and saw it, too.

Marily started counting, yet the other two didn't run away. Star reached out and took Robert's hand and they merely stood there. For an instant, they seemed to shimmer and — *they disappeared without moving a step!*

Marily finished her counting and ran around to the few possible hiding places in the yard. When she couldn't find them, she started to blubber and pushed through the hedge to Ruth's back door.

"They runned away from me again," she whined through the screen at Ruth.

Jim and I stood staring out the

window. I glanced at him. His face was set and pale, but probably no worse than my own.

We saw the instant shimmer again. Star, and then immediately Robert, materialized from the air and ran up to the tree, shouting, "Safe! Safe!"

Marily let out a bawl and ran home to her mother.

I CALLED Star and Robert into the house. They came, still holding hands, a little shamefaced, a little defiant.

How to begin? What in hell could I say?

"It's not exactly fair," I told them. "Marily can't follow you there." I was shooting in the dark, but I had at least a glimmering to go by.

Star turned pale enough for the freckles on her little nose to stand out under her tan. Robert blushed and turned to her fiercely.

"I told you so, Star. I *told* you so! I said it wasn't sporting," he accused. He turned to me. "Marily can't play good hide-and-seek anyway. She's only a Stupid."

"Let's forget that for a minute, Robert." I turned to her. "Star, just where do you go?"

"Oh, it's nothing, Daddy." She spoke defensively, belittling the whole thing. "We just go a little ways when we play with her. She ought to be able to find us a little ways."

"That's evading the issue. *Where* do you go—and *how* do you go?"

Jim stepped forward and showed her the bronze coin I'd sent him.

"You see, Star," he said quietly. "We've found this."

"I shouldn't have to tell you my game." She was almost in tears. "You're both just Tweens. You couldn't understand." Then, struck with contrition, she turned to me. "Daddy, I've tried and tried to ESP you. Truly I did. But you don't ESP worth anything." She slipped her hand through Robert's arm. "Robert does it very nicely," she said primly, as though she were complimenting him on using his fork the right way. "He must be better than I am, because I don't know how he finds me."

"I'll tell you how I do it, Star," Robert exclaimed eagerly. It was as if he were trying to make amends now that grownups had caught on. "You don't use any imagination. I never saw anybody with so little imagination!"

"I do, too, have imagination," she countered loudly. "I thought up the game, didn't I? I told you how to do it, didn't I?"

"Yeah, yeah!" he shouted back. "But you always have to look at a book to ESP what's in it, so you leave an ESP smudge. I just go to the encyclopedia and

ESP where you did—and I go to that place—and there you are. It's simple."

Star's mouth dropped open in consternation.

"I never thought of that," she said.

Jim and I stood there, letting the meaning of what they were saying penetrate slowly into our incredulous minds.

"Anyway," Robert was saying, "you haven't any imagination." He sank down cross-legged on the floor. "You can't teleport yourself to any place that's never been."

She went over to squat down beside him. "I can, too! What about the Moon People? They haven't been yet."

He looked at her with childish disgust.

"Oh, Star, they have so been. You know that." He spread his hands out as though he were a baseball referee. "That time hasn't been yet for your daddy here, for instance, but it's already been for somebody like—well, say, like those things from Arcturus."

"Well, neither have you teleported yourself to some place that never was," Star was arguing back. "So there."

WAVING Jim to one chair, I sank down shakily into another. At least the arms of the chair felt solid beneath my hands.

"Now, look, kids," I interrupted their evasive tactics. "Let's start at the beginning. I gather you've figured a way to travel to places in the past or future."

"Well, of course, Daddy." Star shrugged the statement aside nonchalantly. "We just TP ourselves by ESP anywhere we want to go. It doesn't do any harm."

And these were the children who were too little to cross the street!

I have been through times of shock before. This was the same—somehow, the mind becomes too stunned to react beyond a point. One simply plows through the rest, the best he can, almost normally.

"Okay, okay," I said, and was surprised to hear the same tone I would have used over an argument about the biggest piece of cake. "I don't know whether it's harmful or not. I'll have to think it over. Right now, just tell me how you do it."

"It would be so much easier if I could ESP it to you," Star said doubtfully.

"Well, pretend I'm a Stupid and tell me in words."

"You remember the Moebius Strip?" she asked very slowly and carefully, starting with the first and most basic point in almost the way one explains to an ordinary child.

Yes, I remembered it. And I

remembered how long ago it was that she had discovered it. Over a year, and her busy, brilliant mind had been exploring its possibilities ever since. And I thought she had forgotten it!

"That's where you join the ends of a strip of paper together with a half twist to make one surface," she went on, as though jogging my undependable, slow memory.

"Yes." I answered. "We all know the Moebius Strip."

Jim looked startled. I had never told him about the incident.

"Next you take a sheet and you give it a half twist and join the edge to itself all over to make a funny kind of holder."

"Klein's Bottle," Jim supplied. She looked at him in relief.

"Oh, you know about that," she said. "That makes it easier. Well, then, the next step. You take a cube"—Her face clouded with doubt again, and she explained, "You can't do this with your hands. You've gotta ESP it done, because it's an imaginary cube anyway."

She looked at us questioningly. I nodded for her to continue.

"And you ESP the twisted cube all together the same way you did Klein's Bottle. Now if you do that big enough, all around you, so you're sort of half twisted in the middle, then you can TP yourself anywhere you want to

go. And that's all there is to it," she finished hurriedly.

"Where have you gone?" I asked her quietly.



The technique of doing it would take some thinking. I knew enough physics to know that was the way the dimensions were built up. The line, the plane, the cube—Euclidian physics. The Möbius Strip, the Klein Bottle, the unnamed twisted cube—Einsteinian physics. Yes, it was possible.

"Oh, we've gone all over," Star answered vaguely. "The Romans and the Egyptians—places like that."

"You picked up a coin in one of those places?" Jim asked.

He was doing a good job of keeping his voice casual. I knew the excitement he must be feeling, the vision of the wealth of knowl-

edge which must be opening before his eyes.

"I found it, Daddy," Star answered Jim's question. She was about to cry. "I found it in the dirt, and Robert was about to catch me. I forgot I had it when I went away from there so fast." She looked at me pleadingly. "I didn't mean to steal it, Daddy. I never stole anything, anywhere. And I was going to take it back and put it right where I found it. Truly I was. But I dropped it again, and then I ESP'd that you had it. I guess I was awful naughty."

I brushed my hand across my forehead.

"Let's skip the question of good and bad for a minute," I said, my head throbbing. "What about this business of going into the future?"

ROBERT spoke up, his eyes shining. "There isn't any future, Mr. Holmes. That's what I keep telling Star, but she can't reason—she's just a girl. It'll all pass. Everything is always past."

Jim stared at him, as though thunderstruck, and opened his mouth in protest. I shook my head warningly.

"Suppose you tell me about that, Robert," I said.

"Well," he began on a rising note, frowning, "it's kinda hard to explain at that. Star's a Bright

and even she doesn't understand it exactly. But, you see, I'm older." He looked at her with superiority. Then, with a change of mood, he defended her. "But when she gets as old as I am, she'll understand it okay."

He patted her shoulder consolingly. He was all of six years old.

"You go back into the past. Back past Egypt and Atlantis. That's recent," he said with scorn. "And on back, and on back, and all of a sudden it's future."

"That isn't the way I did it." Star tossed her head contrarily. "I *reasoned* the future. I reasoned what would come next, and I went there, and then I reasoned again. And on and on. I can, too, reason."

"It's the same future," Robert told us dogmatically. "It has to be, because that's all that ever happened." He turned to Star. "The reason you never could find any Garden of Eden is because there wasn't any Adam and Eve." Then to me, "And man didn't come from the apes, either. Man started himself."

Jim almost strangled as he leaned forward, his face red and his eyes bulging.

"How?" he choked out.

Robert sent his gaze into the far distance.

"Well," he said, "a long time from now—you know what I

mean, as a Stupid would think of Time-From-Now — men got into a mess. Quite a mess—

"There were some people in that time who figured out the same kind of traveling Star and I do. So when the world was about to blow up and form a new star, a lot of them teleported themselves back to when the Earth was young, and they started over again."

Jim just stared at Robert, unable to speak.

"I don't get it," I said.

"Not everybody could do it," Robert explained patiently. "Just a few Brights. But they enclosed a lot of other people and took them along." He became a little vague at this point. "I guess later on the Brights lost interest in the Stupids or something. Anyway, the Stupids sank down lower and lower and became like animals." He held his nose briefly. "They smelled worse. They worshiped the Brights as gods."

Robert looked at me and shrugged.

"I don't know all that happened. I've only been there a few times. It's not very interesting. Anyway," he finished, "the Brights finally disappeared."

"I'd sure like to know where they went," Star sighed. It was a lonely sigh. I helplessly took her hand and gave my attention back to Robert.

"I still don't quite understand," I said.

He grabbed up some scissors, a piece of cellophane tape, a sheet of paper. Quickly he cut a strip, gave it a half twist, and taped it together. Then rapidly, on the Moebius Strip, he wrote: "Cave men, This men, That men, Mu Men, Atlantis Men, Egyptians, History Men, Us Now Men, Atom Men, Moon Men, Planet Men, Star Men—"

"There," he said. "That's all the room there is on the strip. I've written clear around it. Right after Star Men comes Cave Men. It's all one thing, joined together. It isn't future, and it isn't past, either. It just plain *is*. Don't you see?"

"I'd sure like to know how the Brights got off the strip," Star said wistfully.

I HAD all I could take.

"Look, kids," I pleaded. "I don't know whether this game's dangerous or not. Maybe you'll wind up in a lion's mouth, or something."

"Oh, no, Daddy!" Star shrilled in glee. "We'd just TP ourselves right out of there."

"But fast," Robert chortled in agreement.

"Anyway, I've got to think it over," I said stubbornly. "I'm only a Tween, but, Star, I'm your daddy and you're just a little

girl, so you have to mind me."

"I always mind you," she said virtuously.

"You do, eh?" I asked. "What about going off the block? Visiting the Greeks and Star Men isn't my idea of staying on the block."

"But you didn't say that, Daddy. You said not to cross the street. And I never did cross the street. Did we, Robert? Did we?"

"We didn't cross a single street, Mr. Holmes," he insisted.

"My God!" said Jim, and he went on trying to light a cigarette.

"All right, all *right*! No more leaving this time, then," I warned.

"Wait!" It was a cry of anguish from Jim. He broke the cigarette in sudden frustration and threw it in an ashtray. "The museum, Pete," he pleaded. "Think what it would mean. Pictures, specimens, voice recordings. And not only from historical places, but Star men, Pete. *Star men*! Wouldn't it be all right for them to go places they know are safe? I wouldn't ask them to take risks, but—"

"No, Jim," I said regretfully. "It's your museum, but this is my daughter."

"Sure," he breathed. "I guess I'd feel the same way."

I turned back to the youngsters.

"Star, Robert," I said to them both, "I want your promise that

you will not leave this time, until I let you. Now I couldn't punish you if you broke your promise, because I couldn't follow you. But I want your promise on your word of honor you won't leave this time."

"We promise." They each held up a hand, as if swearing in court. "No more leaving this time."

I let the kids go back outside into the yard. Jim and I looked at one another for a long while, breathing hard enough to have been running.

"I'm sorry," I said at last.

"I know," he answered. "So am I. But I don't blame you. I simply forgot, for a moment, how much a daughter could mean to a man." He was silent, and then added, with the humorous quirk back at the corner of his lips, "I can just see myself reporting this interview to the museum."

"You don't intend to, do you?" I asked, alarmed.

"And get myself canned or laughed at? I'm not that stupid."

September 10th

AM I actually getting it? I had a flash for an instant. I was concentrating on Caesar's triumphant march into Rome. For the briefest of instants, *there it was!* I was standing on the roadway, watching. But, most peculiar, it was still a picture; I

was the only thing moving. And then, just as abruptly, I lost it.

Was it only a hallucination? Something brought about by intense concentration and wishful thinking?

Now let's see. You visualize a cube. Then you ESP it a half twist and seal the edges together—No, when it has the half twist there's only one surface. You seal that surface all around you—

Sometimes I think I have it. Sometimes I despair. If only I were a Bright instead of a Tween!

October 23rd

I DON'T see how I managed to make so much work of teleporting myself. It's the simplest thing in the world, no effort at all. Why, a child could do it! That sounds like a gag, considering that it was two children who showed me how, but I mean the whole thing is easy enough for even almost any kid to learn. The problem is understanding the steps . . . no, not understanding, because I can't say I do, but working out the steps in the process.

There's no danger, either. No wonder it felt like a still picture at first, for the speeding up is incredible. That bullet I got in the way of, for instance—I was able to go and meet it and walk along beside it while it traveled through the air. To the men who

were dueling, I must have been no more than an instantaneous streak of movement.

That's why the youngsters laughed at the suggestion of danger. Even if they materialized right in the middle of an atomic blast, it is so slow by comparison that they could TP right out again before they got hurt. The blast can't travel any faster than the speed of light, you see, while there is no limit to the speed of thought.

But I still haven't given them permission to teleport themselves out of this time yet. I want to go over the ages pretty carefully before I do; I'm not taking any chances, even though I don't see how they could wind up in any trouble. Still, Robert claimed the Brights went from the future back into the beginning, which means they could be going through time and overtake any of the three of us, and one of them might be hostile—

I feel like a louse, not taking Jim's cameras, specimen boxes and recorders along. But there's time for that. Plenty of time, once I get the feel of history without being encumbered by all that stuff to carry.

Speaking of time and history—what a rotten job historians have done! For instance:

George III of England was neither crazy nor a moron. He

wasn't a particularly nice guy, I'll admit—I don't see how anybody could be with the amount of flattery I saw—but he was the victim of empire expansion and the ferment of the Industrial Revolution. So were all the other European rulers at the time, though. He certainly did better than Louis of France. At least George kept his job and his head.

On the other hand, John Wilkes Booth was definitely psychotic. He could have been cured if they'd had our methods of psychotherapy then, and Lincoln, of course, wouldn't have been assassinated. It was almost a compulsion to prevent the killing, but I didn't dare . . . God knows what effect it would have had on history. Strange thing, Lincoln looked less surprised than anybody else when he was shot, sad, yes, and hurt emotionally at least as much as physically, yet you'd swear he was expecting it.

Cheops was *plenty* worried about the number of slaves who died while the pyramid was being built. They weren't easy to replace. He gave them four hours off in the hottest part of the day, and I don't think any slaves in the country were fed or housed better.

I never found any signs of Atlantis or Lemuria, just tales of lands far off — a few hundred miles was a big distance then, re-

member—that had sunk beneath the sea. With the Ancients' exaggerated notion of geography, a big island was the same as a continent. Some islands did disappear, naturally, drowning a few thousand villagers and herdsmen. That must have been the source of the legends.

Columbus was a stubborn cuss. He was thinking of turning back when the sailors mutinied, which made him obstinate. I still can't see what was eating Genghis Khan and Alexander the Great—it would have been a big help to know the languages, because their big campaigns started off more like vacation or exploration trips. Helen of Troy was attractive enough, considering, but she was just an excuse to fight.

There were several attempts to federate the Indian tribes before the white man and the Five Nations, but going after wives and slaves ruined the movement every time. I think they could have kept America if they had been united and, it goes without saying, knew the deal they were going to get. At any rate, they might have traded for weapons and tools and industrialized the country somewhat in the way the Japanese did. I admit that's only speculation, but this would certainly have been a different world if they'd succeeded!

One day I'll put it all in a

comprehensive *and corrected* history of mankind, *complete with photographs*, and then let the "experts" argue themselves into nervous breakdowns over it.

I didn't get very far into the future. Nowhere near the Star Men, or, for that matter, back to the beginning that Robert told us about. It's a matter of reasoning out the path and I'm not a Bright. I'll take Robert and Star along as guides, when and if.

What I did see of the future wasn't so good, but it wasn't so bad, either. The real mess obviously doesn't happen until the Star Men show up very far ahead in history, if Robert is right, and I think he is. I can't guess what the trouble will be, but it must be something ghastly if they won't be able to get out of it even with the enormously advanced technology they'll have. Or maybe that's the answer. It's almost true of us now.

November, Friday 14th

THE Howells have gone for a weekend trip and left Robert in my care. He's a good kid and no trouble. He and Star have kept their promise, but they're up to something else. I can sense it and that feeling of expectant dread is back with me.

They've been secretive of late. I catch them concentrating intensely, sighing with vexation,

and then breaking out into unexplained giggles.

"Remember your promise," I warned Star while Robert was in the room.

"We're not going to break it, Daddy," she answered seriously.

They both chorused, "No more leaving this time."

But they both broke into giggles!

I'll have to watch them. What good it would do, I don't know. They're up to something, yet how can I stop them? Shut them in their rooms? Tan their hides?

I wonder what someone else would recommend.

Sunday night

THE kids are gone!

I've been waiting an hour for them. I know they wouldn't stay away so long if they could get back. There must be something they've run into. Bright as they are, they're still only children.

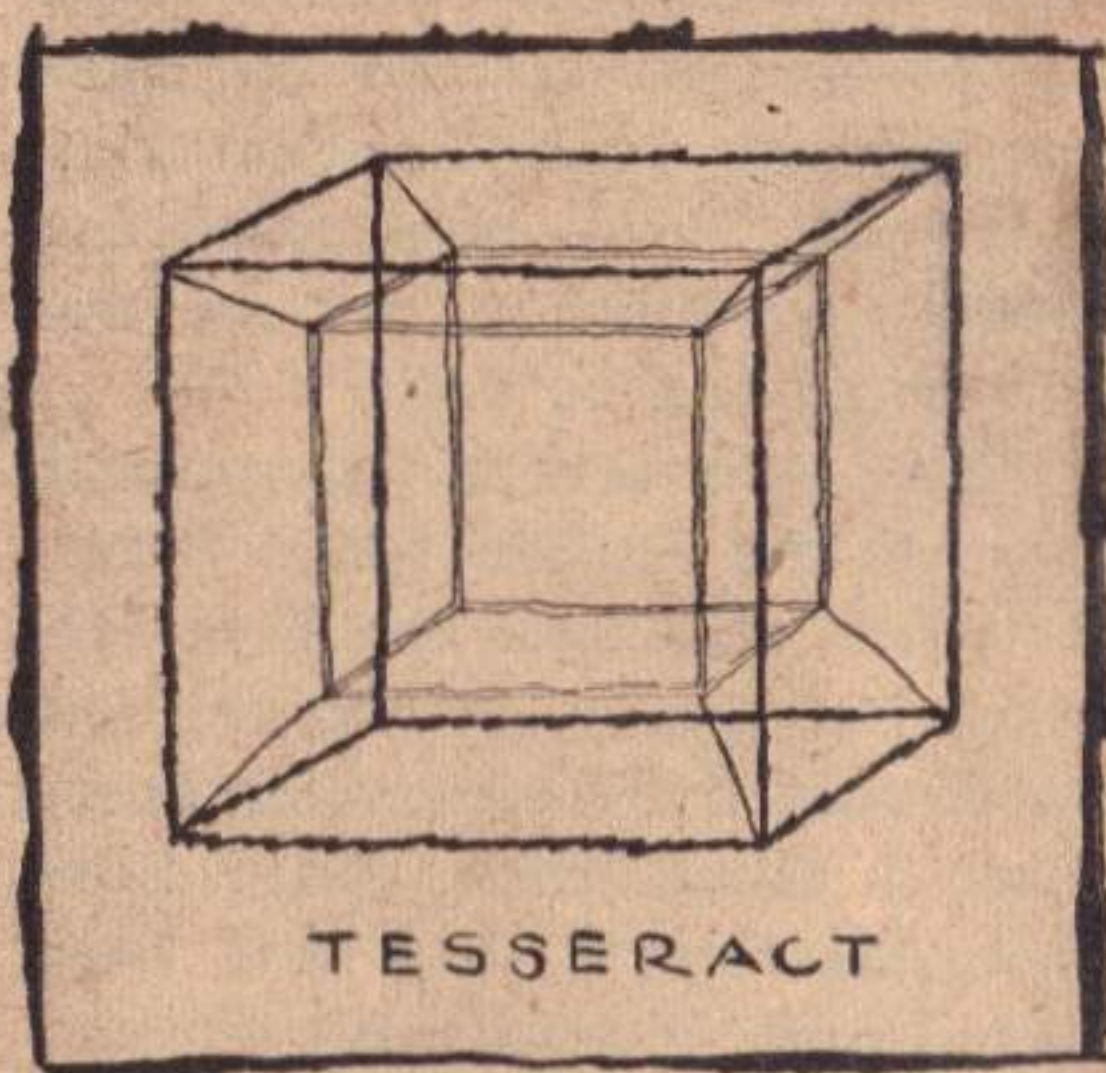
I have some clues. They promised me they wouldn't go out of this present time. With all her mischievousness, Star has never broken a promise to me—as her typically feminine mind interprets it, that is. So I know they are in our own time.

On several occasions Star has brought it up, wondering where the Old Ones, the Bright Ones, have gone—how they got off the Moebius Strip.

That's the clue. How can I get off the Moebius Strip and remain in the present?

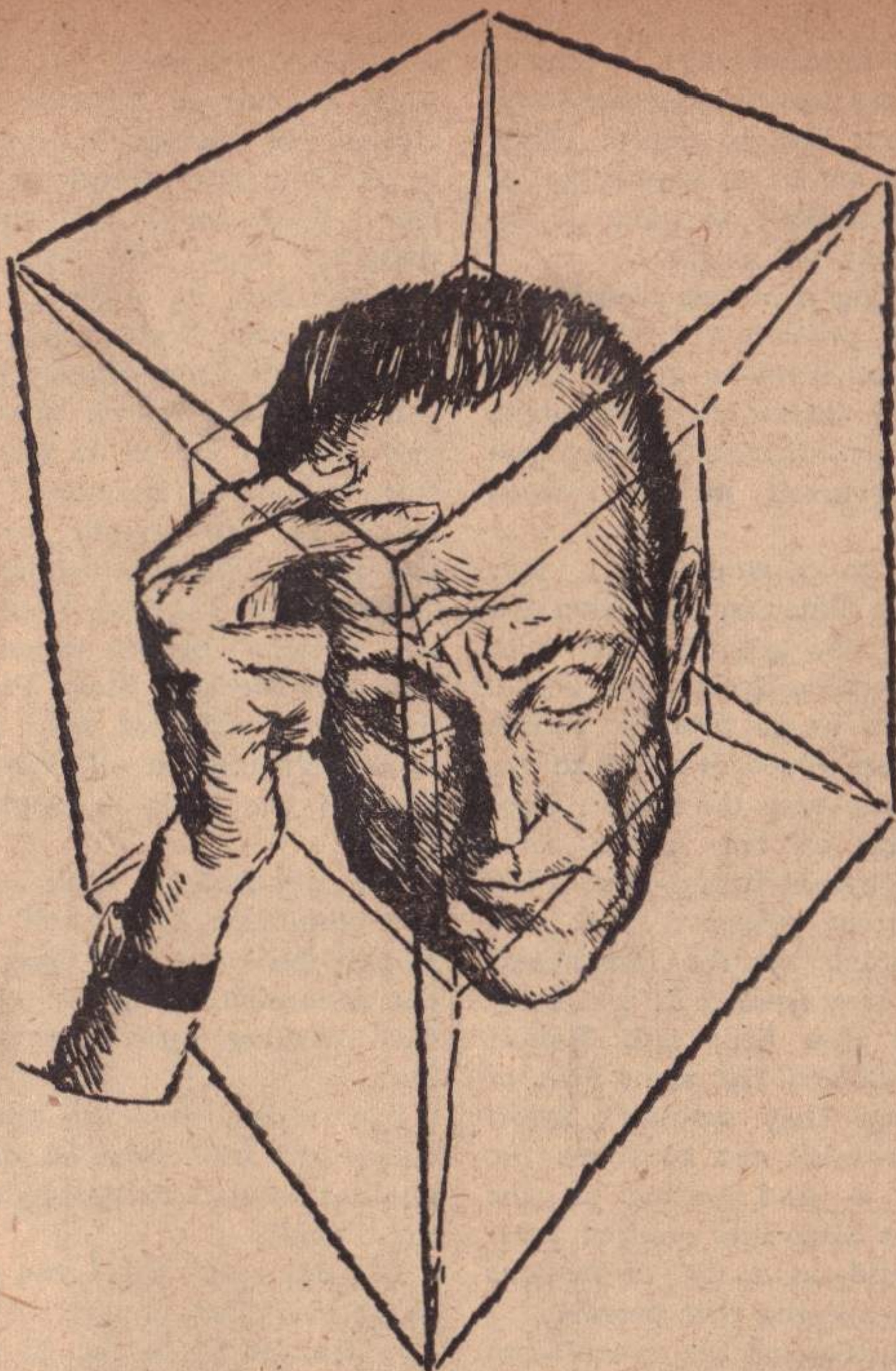
A cube won't do it. There we have a mere journey along the single surface. We have a line, we have a plane, we have a cube. And then we have a supercube—a tesseract. That is the logical progression of mathematics. The Bright Ones must have pursued that line of reasoning.

Now I've got to do the same, but without the advantage of being a Bright. Still, it's not the same as expecting a normally in-



TESSERACT

telligent person to produce a work of genius. (Genius by our standards, of course, which I suppose Robert and Star would classify as Tween.) Anyone with a pretty fair I.Q. and proper education and training can follow a genius's logic, provided the steps are there



and especially if it has a practical application. What he can't do is initiate and complete that structure of logic. I don't have to, either—that was done for me by

a pair of Brights and I "simply" have to apply their findings.

Now let's see if I can.

By reducing the present-past-future of man to a Moebius Strip,

we have sheared away a dimension. It is a two-dimensional strip, because it has no depth. (Naturally, it would be impossible for a Moebius Strip to have depth; it has only one surface.)

Reducing it to two dimensions makes it possible to travel anywhere you want to go on it via the third dimension. And you're in the third dimension when you enfold yourself in the twisted cube.

Let's go a step higher, into one more dimension. In short, the tesseract. To get the equivalent of a Moebius Strip with depth, you have to go into the fourth dimension, which, it seems to me, is the only way the Bright Ones could get off this closed cycle of past-present-future-past. They must have reasoned that one more notch up the dimensions was all they needed. It is equally obvious that Star and Robert have followed the same line of reasoning; they wouldn't break their promise not to leave the present — and getting off the Moebius Strip into *another* present would, in a sort of devious way, be keeping that promise.

I'm putting all this speculation down for you, Jim Pietre, knowing first that you're a Tween like myself, and second that you're sure to have been doing a lot of thinking about what happened after I sent you the coin Star

dropped. I'm hoping you can explain all this to Bill and Ruth Howell—or enough, in any case, to let them understand the truth about their son Robert and my daughter Star, and where the children may have gone.

I'm leaving these notes where you will find them, when you and Bill and Ruth search the house and grounds for us. If you read this, it will be because I have failed in my search for the youngsters. There is also the possibility that I'll find them and that we won't be able to get back onto this Moebius Strip. Perhaps time has a different value there, or doesn't exist at all. What it's like off the Strip is anybody's guess.

Bill and Ruth: I wish I might give you hope that I will bring Robert back to you. But all I can do is wish. It may be no more than wishing upon a star—my Star.

I'm trying now to take six cubes and fold them in on one another so that every angle is a right angle.

It's not easy, but I can do it, using every bit of concentration I've learned from the kids. All right, I have the six cubes and I have every angle a right angle.

Now if, in the folding, I ESP the tesseract a half twist around myself and—

—MARK CLIFTON

wailing wall

By ROGER DEE

*An enormous weapon is forcing
people to keep their troubles
to themselves — it's dynamite!*

Illustrated by ED ALEXANDER

NUMB with the terror that had dogged him from the moment he regained consciousness and found himself naked and weaponless, Farrell had no idea how long he had been lost in the honeycombed darkness of the Hymenop dome.

The darkness and damp chill of air told him that he was far underground, possibly at the

hive's lowest level. Somewhere above him, the silent audience chambers lay shrouded in lesser gloom, heavy with the dust of generations and peopled only by cryptic apian images. Outside the dome, in a bend of lazy silver river, sprawled the Sadr III village with its stoic handful of once-normal Terran colonists and, on the hillside above the

village, Gibson and Stryker and Xavier would be waiting for him in the disabled Marco Four.

Waiting for him . . .

They might as well have been back on Terra, five hundred light-years away.

Six feet away on either side, the corridor walls curved up faintly, a flattened oval of tunneling designed for multiple alien feet, lighted for faceted eyes demanding the merest fraction of light necessary for an Earthman's vision. For two yards Farrell could see dimly, as through a heavy fog; beyond was nothing but darkness and an outlandish labyrinth of cross-branching corridors that spiraled on forever without end.

Behind him, his pursuers—human natives or Hymenop invaders, he had no way of knowing which—drew nearer with a dry minor rustling whose suggestion of imminent danger sent Farrell plunging blindly on into the maze.

—To halt, sweating, when a sound exactly similar came to him from ahead.

It was what he had feared from the beginning. He could not go on, and he could not go back.

He made out the intersecting corridor to his right, then a vague oval opening that loomed faintly grayer than the wall about it. He darted into it as into a sanctuary,

and realized too late that the choice had been forced upon him.

It had been intended from the start that he should take this way. He had been herded here like a halterless beast, driven by the steady threat of action never quite realized. They had known where he was going, and why.

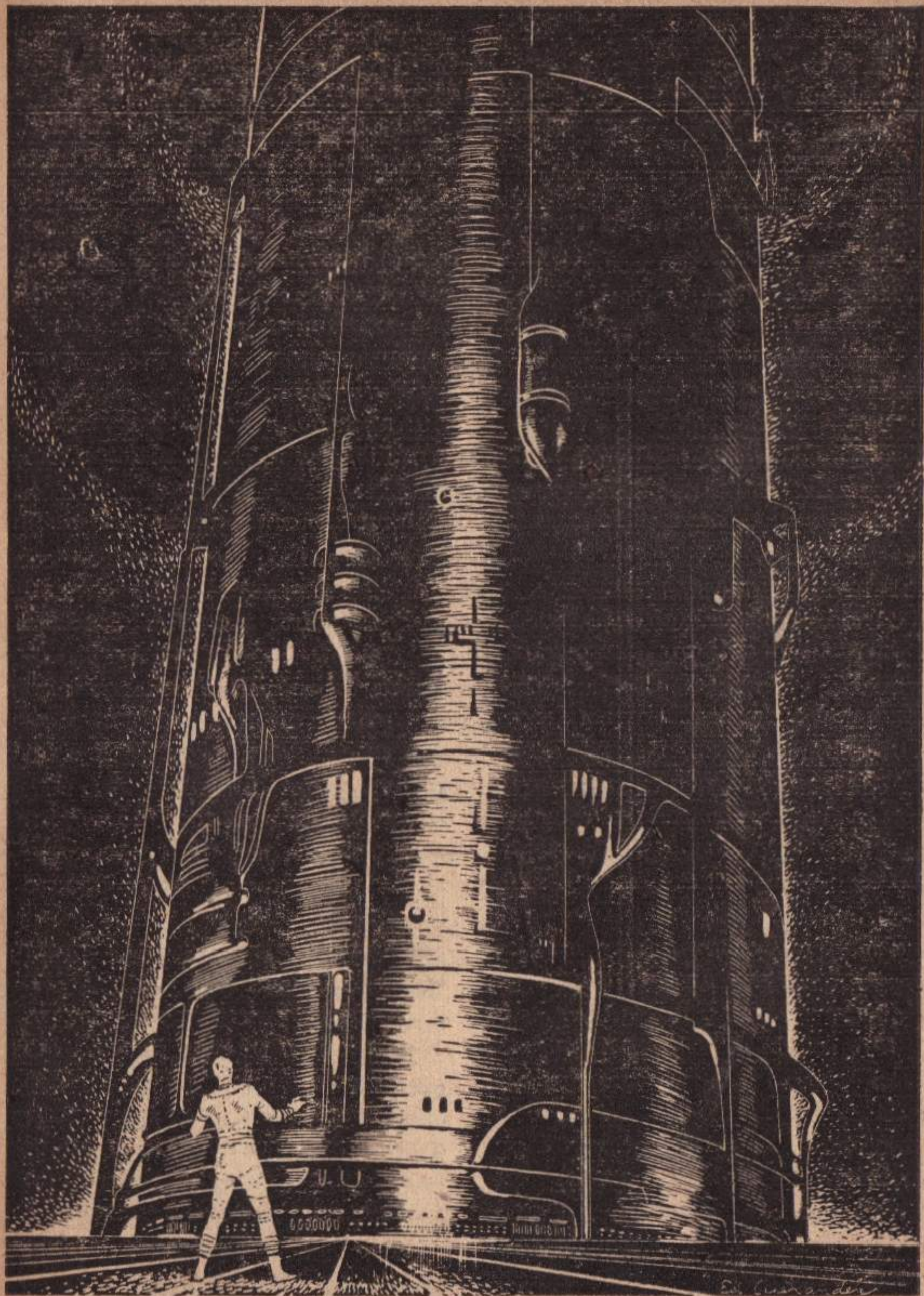
But there was light down there somewhere at the end of the tunnel's aimless wanderings. If, once there, he could see—

He did not find light, only a lesser darkness. The tunnel led him into a larger place whose outer reaches were lost in shadow, but whose central area held a massive cylindrical machine at once alien and familiar.

He went toward it hesitantly, confused for the moment by a paramnesiac sense of repeated experience, the specious recognition of déjà vu.

It was a Ringwave generator, and it was the thing he had ventured into the dome to find.

His confusion stemmed from its resemblance to the disabled generator aboard the Marco Four, and from the stereo-sharp associations it evoked: Gibson working over the ship's power plant, his black-browed face scowling and intent, square brown body moving with a wrestler's easy economy of motion; Stryker, bald and fat and worried, wheezing up and down the companion-



way from engine bay to chart room, his concern divided between Gibson's task and Farrell's long silence in the dome.

Stryker at this moment would be regretting the congenital optimism that had prompted him to send his navigator where he himself could not go. Sweating anxiety would have replaced Stryker's pontifical assurance, dried up his smug pattering of socio-psychological truisms lifted from the *Colonial Reclamations Handbook* . . .

"SO far as adaptability is concerned," Stryker had said an eternal evening before, "*homo sapiens* can be a pretty weird species. More given to mulish paradox, perhaps, than any alien life-form we're ever likely to run across out here."

He had shifted his bulk comfortably on the grass under the *Marco Four's* open port, undisturbed by the busy clatter of tools inside the ship where Gibson and Xavier, the *Marco's* mechanical, worked over the disabled power plant. He laced his fingers across his fat paunch and peered placidly through the dusk at Farrell, who lay on his back, smoking and watching the stars grow bright in the evening sky.

"Isolate a human colony from its parent planet for two centuries, enslave it for half that

time to a hegemony as foreign as the Hymenops' hive-culture before abandoning it to its own devices, and anything at all in the way of eccentric social controls can develop. But men remain basically identical, Arthur, in spite of acquired superficial changes. They are inherently incapable of evolving any system of control mechanisms that cannot be understood by other men, provided the environmental circumstances that brought that system into being are known. At bottom, these Sadr III natives are no different from ourselves. Heredity won't permit it."

Farrell, half listening, had been staring upward between the icy white brilliance of Deneb and the twin blue-and-yellow jewels of Albireo, searching for a remote twinkle of Sol. Five hundred light-years away out there, he was thinking, lay Earth. And from Earth all this gaudy alien glory was no more than another point of reference for backyard astronomers, a minor configuration casually familiar and unremarkable.

A winking of lighted windows springing up in the village down-slope brought his attention back to the scattered cottages by the river, and to the great disquieting curve of the Hymenop dome that rose above them like a giant above pygmies. He sat up rest-

lessly, the wind ruffling his hair and whirling the smoke of his cigarette away in thin flying spirals.

"You sound as smug as the Reorientation chapter you lifted that bit from," Farrell said. "But it won't apply here, Lee. The same thing happened to these people that happened to the other colonists we've found, but they don't react the same. Either those Hymenop devils warped them permanently or they're a tribe of congenital maniacs."

Stryker prodded him socratically: "Particulars?"

"When we crashed here five weeks ago, there were an even thousand natives in the village, plus or minus a few babes in arms. Since that time they've lost a hundred twenty-six members, all suicides or murders. At first the entire population turned out at sunrise and went into the dome for an hour before going to the fields; since we came, that period has shortened progressively to a few minutes. That much we've learned by observation. By direct traffic we've learned exactly nothing except that they can speak Terran Standard, but won't. What sort of system is that?"

Stryker tugged uncomfortably at the rim of white hair the years had left him. "It's a stumper for the moment, I'll admit . . . if

they'd only *talk* to us, if they'd tell us what their wants and fears and problems are, we'd know what is wrong and what to do about it. But controls forced on them by the Hymenops, or acquired since their liberation, seem to have altered their original ideology so radically that—"

"That they're plain batty," Farrell finished for him. "The whole setup is unnatural, Lee. Consider this: We sent Xavier out to meet the first native that showed up, and the native talked to him. We heard it all by monitoring; his name was Tarvil, he spoke Terran Standard, and he was amicable. Then we showed ourselves, and when he saw that we were human beings like himself and not mechanicals like Xav, he clammed up. So did everyone in the village. It worries me, Lee. If they didn't expect men to come out of the *Marco*, then what in God's name *did* they expect?"

He sat up restlessly and stubbed out his cigarette. "It's an unimportant world anyway, all ocean except for this one small continent. I think we ought to write it off and get the hell out as soon as the *Marco's* Ringwave is repaired."

"We can't write it off," Stryker said. "Besides reclaiming a colony, we may have added a valuable marine food source to the Federation. Arthur, you're not

letting a handful of disoriented people get under your skin, are you?"

Farrell made an impatient sound and lit another cigarette. The brief flare of his lighter pierced the darkness and picked out a hurried movement a short stone's throw away, between the *Marco Four* and the village.

"THERE'S one reason why I'm edgy," Farrell said. "These Sadrians may be harmless, but they make a point of posting a guard over us. There's a sentry out there in the grass flats again tonight." He turned on Stryker uneasily. "I've watched on the infra-scanner while those sentries changed shifts, and they don't speak to each other. I've tracked them back to the village, but I've never seen one of them turn in a—"

Down in the village a man screamed, a raw, tortured sound that brought both men up stiffly. A frantic drumming of running feet came to them, unmistakable across the little distance. The fleeing man came up from the dark huddle of cottages by the river and out across the grass flats, screaming.

Pursuit overtook him halfway to the ship. There was a brief scuffling, a shadowy dispersal of silent figures. After that, nothing.

"They did it again," Farrell

said. "One of them tried to come up here to us. The others killed him, and who's to say what sort of twisted motive prompted them? They go to the dome together every morning, not speaking. They work all day in the fields without so much as looking at each other. But every night at least one of them tries to escape from the village and come up here—and this is what happens. We couldn't trust them, Lee, even if we could understand them!"

"It's our job to understand them," Stryker said doggedly. "Our function is to find colonies disoriented by the Hymenops and to set them straight if we can. If we can't, we call in a long-term reorientation crew, and within three generations the culture will pass again for Terran. The fact that slave colonies invariably lose their knowledge of longevity helps; they don't get it back until they're ready for it.

"I've seen some pretty foul results of Hymenop experimenting on human colonies, Arthur. There was the ninth planet of Beta Pegasi—rediscovered in 3910, I think it was—that developed a religious fixation on fertility, a mania fostered by the Hymenops to supply expendable labor for their mines. The natives stopped mining when the Hymenops gave up the invasion and went back to

70 Ophiuchi, but they were still multiplying like rabbits when we found them. They followed a cultural conviction something like that observed in Oriental races of ancient Terran history, but they didn't pursue the Oriental tradition of sacrosancts. They couldn't—there were too many of them. By the time they were found, they numbered fourteen *billions* and they were eating each other. Still it took only three generations to set them straight."

He took one of Farrell's cigarettes and puffed it placidly.

"For that matter, Earth had her own share of eccentric cultures. I recall reading about one that existed as late as the twentieth century and equaled anything we're likely to find here. Any society should be geared to a set of social controls designed to furnish it, as a whole with a maximum of pleasure and a minimum of discomfort, but these ancient Terrestrial Dobuans—*island aborigines*, as I remember it—had adjusted to their total environment in a manner exactly opposite. They reversed the norm and became a society of paranoiacs, hating each other in direct ratio to nearness of relationship. Husbands and wives detested each other, sons and fathers—"

"Now you're pulling my leg," Farrell protested. "A society like

that would be too irrational to function."

"But the system worked," Stryker insisted. "It balanced well enough, as long as they were isolated. They accepted it because it was all they knew, and an abrupt reversal that negated their accustomed habits would create an impossible societal conflict. They were reoriented after the Fourth War, and succeeding generations adjusted to normal living without difficulty."

A sound from overhead made them look up. Gibson was standing in the *Marco's* open port.

"Conference," Gibson said in his heavy baritone, and went back inside.

THEY followed Gibson quickly and without question, more disturbed by the terse order than by the killing in the grass flats. Knowing Gibson, they realized that he would not have wasted even that one word unless emergency justified it.

They found him waiting in the chart room with Xavier. For the thousandth time, seeing the two together, Farrell found himself comparing them: the robot, smoothly functional from flexible gray plastoid body to featureless oval faceplate, blandly efficient, totally incapable of emotion; Gibson, short and dark and competent, heavy-browed and humor-

less. Except for initiative, Farrell thought, the two of them could have traded identities and no one would have been able to notice any difference.

"Xav and I found our Ring-wave trouble," Gibson said. "The generator is functioning, but the warp isn't going out. Something here on Sadr III is neutralizing it."

They stared at him as if he had just told them the planet was flat.

"But a Ringwave can't be stopped completely, once it is started," Stryker protested. "You'd have to dismantle it to shut it off, Gib!"

"The warping field can be damped out, though," Gibson said. "Adjacent generators operating at different phase levels will heterodyne at a frequency representing the mean variance between levels. The resulting beat-phase will be too low to maintain either field, and one or the other, or both, will blank out. If you remember, all Terran-designed power plants are set to the same phase for that reason."

"But these natives can't have a Ringwave plant!" Farrell argued. "There's only this one village on Sadr III, Gib, an insignificant little agrarian township! If they had the Ringwave, they'd be mechanized. They'd have vehicles, landing ports . . ."

"The Hymenops had the Ring-wave," Gibson interrupted. "And they left the dome down there, the first undamaged one we've found. Figure it out for yourselves."

They digested the statement in silence. Stryker paled slowly, as if it needed time for apprehension to work its way through his fat bulk. Farrell's uneasiness, sourceless until now, grew to chill certainty.

"I think I've expected this, without realizing it, since my first flight," he said. "It stood to reason that the Hymenops would quit running somewhere, that we'd bump into them eventually out here on the fringes. Twenty thousand light-years back to 70 Ophiuchi is a long way to retreat . . . Gib, do you think they're still here?"

Gibson did not shrug, but his voice seemed to. "It won't matter one way or the other unless we can clear the *Marco's* generator."

From another man it might have been irony. Knowing Gibson, Farrell and Stryker accepted it as a bald statement of fact.

"Then we're up against a Hymenop hive-mind," Stryker said. "And we can't run away from it. Any suggestions?"

"We'll have to find the interfering generator and stop it," Farrell offered, knowing that was the

only obvious solution.

"One alternative," Gibson corrected. "If we can determine what phase-level the interfering warp uses, we may be able to adjust the Marco's generator to match it. Once they're in resonance, they won't interfere." He caught Stryker's unspoken question and answered it. "It would take a week. Maybe longer."

Stryker vetoed the alternative. "Too long. If there are Hymenops here, they won't give us that much time."

Farrell switched on the chart room scanning screen and centered it on the village downslope. Scattered cottages with dark tiled roofs and lamp-bright windows showed up clearly. Out of their undisciplined grouping swept the great hemispherical curve of the dome, glinting dully metallic in the starshine.

"Maybe we're jumping to conclusions," he said. "We've been here for five weeks without seeing a trace of Hymenops, and from what I've read of them, they'd have jumped us the minute we landed. Chances are that they left Sadr III in too great a hurry to wreck the dome, and their Ringwave power plant is still running."

"You may be right," Stryker said, brightening. "They carried the fight to us from the first skirmish, two hundred years ago, and

they damned near beat us before we learned how to fight them."

He looked at Xavier's silent plastoid figure with something like affection. "We'd have lost that war without Xave's kind. We couldn't match wits with Hymenop hive-minds, any more than a swarm of grasshoppers could stand up to a colony of wasps. But we made mechanicals that could. Cybernetic brains and servo-crews, ships that thought for themselves . . ."

He squinted at the visiscreen with its cryptic, star-streaked dome. "But they don't think as we do. They may have left a rear guard here, or they may have boobytrapped the dome."

"One of us will have to find out which it is," Farrell said. He took a restless turn about the chart room, weighing the probabilities. "It seems to fall in my department."

Stryker stared. "You? Why?"

"Because I'm the only one who can go. Remember what Gib said about changing the Marco's Ringwave to resonate with the interfering generator? Gib can make the change; I can't. You're —"

"Too old and fat," Stryker finished for him. "And too damned slow and garrulous. You're right, of course."

They let it go at that and put Xavier on guard for the night.

The mechanical was infinitely more alert and sensitive to approach than any of the crew, but the knowledge did not make Farrell's sleep the sounder.

He dozed fitfully, waking a dozen times during the night to smoke cigarettes and to speculate fruitlessly on what he might find in the dome. He was sweating out a nightmare made hideous by monstrous bees that threatened him in buzzing alien voices when Xavier's polite monotone woke him for breakfast.

FARRELL was halfway down the grassy slope to the village when he realized that the *Marco* was still under watch. Approaching close enough for recognition, he saw that the sentry this time was Tarvil, the Sadrian who had first approached the ship. The native's glance took in Farrell's shoulder-pack of testing tools and audiphone, brushed the hand-torch and blast gun at the Ter-ran's belt, and slid away without trace of expression.

"I'm going into the dome," Farrell said. He tried to keep the uncertainty out of his voice, and felt a rasp of irritation when he failed. "Is there a taboo against that?"

The native fell in beside him without speaking and they went down together, walking a careful ten feet apart, through dew-

drenched grass flats that gleamed like fields of diamonds under the early morning sun. From the village, as they approached, straggled the inevitable exodus of adults and half-grown children, moving silently out to the fields.

"Weird beggars," Farrell said into his audiphone button. "They don't even rub elbows at work. You'd think they were afraid of being contaminated."

Stryker's voice came tinnily in his ear. "They won't seem so strange once we learn their motivations. I'm beginning to think this aloofness of theirs is a religious concomitant, Arthur, a hangover from slave-controls designed to prevent rebellion through isolation. Considering what they must have suffered under the Hymenops, it's a wonder they're even sane."

"I'll grant the religious origin," Farrell said. "But I wouldn't risk a centicredit on their sanity. I think the lot of them are nuts."

The village was not deserted, but so far as Farrell's coming was concerned, it might as well have been. The few women and children he saw on the streets ignored him — and Tarvil — completely.

He met with only one sign of interest, when a naked boy perhaps six years old stared curiously and asked something in a childish treble of the woman ac-

companying him. The woman answered with a single sharp word and struck the child across the face, sending him sprawling.

Farrell relayed the incident. "She said '*Quiet!*' and slapped him down, Lee. They start their training early."

"Their sort of indifference couldn't be congenital," Stryker said. His tinny murmur took on a puzzled sound. "But they've been free for four generations. It's hard to believe that any forcibly implanted control mechanism could remain in effect so long."

A shadow blocked the sun, bringing a faint chill to Farrell when he looked up to see the great rounded hump of the dome looming over him.

"I'm going into the dome now," he said. "It's like all the others—no openings except at ground level, where it's riddled with them."

Tarvil did not accompany him inside. Farrell, looking back as he thumbed his hand-torch alight in the nearest entranceway, saw the native squatting on his heels and looking after him without a single trace of interest.

"I'M at ground level," Farrell said later, "in what seems to have been a storage section. Empty now, with dust everywhere except in the corridors the

natives use when they come in, mornings. No sign of Hymenops yet."

Stryker's voice turned worried. "Look sharp for traps, Arthur. The place may be mined."

The upper part of the dome, Farrell knew from previous experience, would have been given over in years past to Hymenop occupation, layer after rising layer of dormitories tiered like honeycombs to conserve space. He followed a spiral ramp downward to the level immediately below surface, and felt his first excitement of discovery when he found himself in the audience chambers that, until the *Marco's* coming, had been the daily goal of the Sadrian natives.

The level was entirely taken up with bare ten-foot cubicles, each cramped chamber dominated by a cryptic metal-and-crystal likeness of the Hymenop head set into the metal wall opposite its corridor entrance. From either side of a circular speaking-grill, the antennae projected into the room, rasplike and alert, above faceted crystal eyes that glowed faintly in the near-darkness. The craftsmanship was faultless, stylized after a fashion alien to Farrell's imagining and personifying with disturbing realism the soulless, arrogant efficiency of the Hymenop hive-mind. To Farrell, there was about

each image a brooding air of hypnotic fixity.

"Something new in Hymenop experiments," he reported to Stryker. "None of the other domes we found had anything like this. These things have some bearing on the condition of the natives, Lee—there's a path worn through the dust to every image, and I can see where the people knelt. I don't like it. I've got a hunch that whatever these damned idols were used for succeeded too well."

"They can't be idols," Stryker said. "The Hymenops would have known how hard it is to displace anthropomorphism entirely from human worship. But I think you're right about the experiment's working too well. No ordinary compulsion would have stuck so long. Periodic hypnosis? Wait, Arthur, that's an angle I want to check with Gibson . . ."

He was back a moment later, wheezing with excitement.

"Gib thinks I'm on the right track — periodic hypnosis. The Hymenops must have assigned a particular chamber and image to each slave. The images are mechanicals, robot mesmerists designed to keep the natives' compulsion-to-isolation renewed. Post-hypnotic suggestion kept the poor devils coming back every morning, and their children with them, even after the Hymenops

pulled out. They couldn't break away until the *Marco's* Ringwave forced a shutdown of the dome's power plant and deactivated the images. Not that they're any better off now that they're free; they don't know how—"

Farrell never heard the rest of it. Something struck him sharply across the back of the head.

WHEN he regained consciousness, he was naked and weaponless and lost. The rustling of approach, bodiless and dreadful in darkness, panicked him completely and sent him fleeing through a sweating eternity that brought him finally to the dome's lowest level and the Hymenop power plant.

He went hesitantly toward the shadowy bulk of the Ringwave cylinder, drawn as much now by its familiarity as driven by the terror behind him. At the base of the towering machine, he made out a control board totally unrecognizable in design, studded with dials and switches clearly intended for alien handling.

The tinny whispering of Stryker's voice in the vaultlike quiet struck him with the frightening feeling that he had gone mad.

He saw his equipment pack then, lying undamaged at the foot of the control board. Stryker's voice murmured from its audicom unit: "We're in the

dome, Arthur. Where are you? What level—"

Farrell caught up the audicom, swept by a sudden wild lift of hope. "I'm at the bottom of the dome, in the Ringwave chamber. They took my gun and torch. For God's sake, hurry!"

The darkness gave up a furtive scuffling of sandaled feet, the tight breathing of many men. Someone made a whimpering sound, doglike and piteous; a Sadrian voice hissed sharply, "Quiet!"

Stryker's metallic whisper said: "We're tracking your carrier, Arthur. Use the tools they left you. They brought you there to repair the Ringwave, to give back the power that kept their images going. Keep busy!"

Farrell, only half understanding, took up his instrument case. His movement triggered a tense rustle in the darkness; the voice whimpered again, a tortured sound that rasped Farrell's nerves like a file on glass.

"Give me back my Voice. I am alone and afraid. I must have Counsel . . ."

Beneath the crying, Farrell felt the terror, incredibly voiced, that weighted the darkness, the horror implicit in stilled breathing, the swelling sense of outrage.

There was a soft rush of bodies, a panting and struggling. The whimpering stopped.

The instrument case slipped out of Farrell's hands. On the heels of its nerve-shattering crash against the metal floor came Stryker's voice, stronger as it came closer.

"Steady, Arthur. They'll kill you if you make a scene. We're coming, Gib and Xav and I. Don't lose your head!"

Farrell crouched back against the cold curve of the Ringwave cylinder, straining against flight with an effort that left him trembling uncontrollably. A spasm of incipient screaming seized his throat and he bit it back savagely, stifling a terror that could not be seen, grasped, fought with.

He was giving way slowly when Xavier's inflectionless voice droned out of the darkness: "Quiet. Your Counsel will be restored."

There was a sudden flood of light, unbearable after long darkness. Farrell had a failing glimpse of Gibson, square face blocked with light and shadow from the actinic flare overhead, racing toward him through a silently dispersing throng of Sadrians.

Then he passed out.

HE was strapped to his couch in the chart room when he awoke. The *Marco Four* was already in space; on the visiscreen, Farrell could see a dwindling

crescent of Sadr III, and behind it, in the black pit of space, the fiery white eye of Deneb and the pyrotechnic glowing of Albireo's blue-and-yellow twins.

"We're headed out," he said, bewildered. "What happened?"

Stryker came over and unstrapped him. Gibson, playing chess with Xavier across the chart-room plotting table, looked up briefly and went back to his gambit.

"We reset the Ringwave in the dome to phase with ours and lugged you out," Stryker explained genially. He was back in character again, his fat paunch quivering with the beginning of laughter. "We're through here. The rest is up to Reorientation."

Farrell gaped at him. "You're giving up on Sadr III?"

"We've done all we can. Those Sadrians need something that a preliminary expedition like ours can't give them. Right now they are willing victims of a rigid religious code that makes it impossible for any one of them to express his wants, hopes, ideals or misfortunes to another. Exchanging confidences, to them, is the ultimate sacrilege."

"Then they are crazy. They'd have to be, with no more opportunity for emotional catharsis than that!"

"They're not insane, they're—adapted. Those robot images you

found are everything to this culture: arbiters, commercial agents, monitors and confessors all in one. They not only relay physical needs from one native to another; they listen to all problems and give solutions. They're Counselors, remember? Man's gregariousness stems largely from his need to unload his troubles on someone else. The Hymenops came up with an efficient substitute here, and the natives accepted it as the norm."

Farrell winced with sudden understanding. "No wonder the poor devils cracked up right and left. With their Ringwave dead, they might as well have been struck blind and dumb! They couldn't even get together among themselves to figure a way out."

"There you have it," Stryker said. "They knew we were responsible for their catastrophe, but they couldn't bring themselves to ask us for help because we were human beings like themselves. So they went mad one by one and committed the ultimate blasphemy of shouting their misery in public, and their fellows had to kill them or countenance sacrilege. But they'll quiet down now. They should be easy enough to handle by the time the Reorientation lads arrive."

He began to chuckle. "We left their Counselors running, but we disconnected the hypnosis-re-

newal circuits. They'll get only what they need from now on, which is an outlet for shifting their personal burdens. And with the post-hypnotic compulsion gone, they'll turn to closer association with each other. Human gregariousness will reassert itself. After a couple of generations, the Reorientation boys can write them off as Terran Normal and move on to the next planetary madhouse we've dug up for them."

Farrell said wonderingly, "I never thought of the need to exchange confidences as being so important. But it is; everyone does it. You and I often talk over personal concerns, and Gib—"

He broke off to study the intent pair at the chessboard, comparing Gibson's calm self-

sufficiency to the mechanical's bland competence.

"There's an exception for your theory, Lee. Iron Man Gibson never gave out with a confidence in his life!"

Stryker laughed. "You may be right. How about it, Gib? Do you ever feel the need of a wailing wall?"

Gibson looked up briefly from his game, his square face unsurprised.

"Well, sure. Why not? I tell my troubles to Xavier."

When they looked at each other blankly, he added, with the nearest approach to humor that either Farrell or Stryker had ever seen in him: "It's a reciprocal arrangement. Xav confides his to me."

—ROGER DEE

FORECAST

Next month brings the conclusion of *GRAVY PLANET* by Frederik Pohl and C. M. Kornbluth. The first two installments were brilliant, but the last is incandescent with ideas and action! You'll hate to see it end, which seems to be characteristic of *GALAXY* serials.

Being in love with anyone at all creates problems enough, but in *YESTERDAY HOUSE*, Fritz Leiber puts his protagonist through something really trying — falling in love with somebody who couldn't possibly exist! Not a ghost story at all, it's based on solid scientific fact.

James Blish faces a desperate problem in *SURFACE TENSION* — mankind must adapt to a thoroughly hostile planet or die! There is a solution, of course . . . a provocative, exciting one . . . and perhaps the weirdest space flight in all science fiction!

All this plus short stories, Willy Ley's *FOR YOUR INFORMATION* and other features.

Origins of Galactic Slang

*Since the beginnings of slang
are usually lost, here is one
way to preserve them...invent
them long before they happen!*

Compiled by **EDWARD WELLEN**

Illustrated by **DAVID STONE**

*Aydee: to delay asking a
question until it becomes un-
answerable.*

O. T. SWIFEL (4217-4259
Unified Era), a Terran
physicist, remains the only being
in the Galaxy believed to have
journeyed into the past. On 203-
day, 4259, Swifel's assistants
helped him don the Entropical
helmet he had devised. With this
helmet he attuned himself to an
artifact found in the ruins of
Rome. Forthwith, Swifel was

transported from his laboratory
in New Zealand to a square in
ancient Rome.



Apparently frightened by the
apparition, a noontday crowd of
toga-clad Romans hurriedly dis-
persed. One man alone stood his
ground.

Swifel, already beginning to suffer from the temporal stress that sapped his energy, staggered to the arch beside which the man stood. Fighting off waves of pain with all the power of his will, Swifel inquired in Latin: "What year is this?"

The man, quite unperturbed, responded that it was 124 A.D. On the verge of blacking out, Swifel snapped himself back to his own era.

But as he dictated the account of his brief excursion, there began the awesome physical transformation which seemingly characterizes travel into the past and which has militated against the desire to repeat Swifel's experiment.

Drained of life-potential, Swifel's body stiffened into a petrified pillar. However, before complete immobilization set in, Swifel managed to voice this question:

"How was he able to answer me in modern English?"

F. E. 'G.: an expression of hostility from an unsuspected source.

THE letters F. E. G. signify *For Emotional Gratification*. The first F. E. G. was activated by the Venusian roboticist Kor Lio (2289-2370 U.E.). One day in 2314, his son, aged four years

Terran, wandered into Kor's home workshop.

The usually mild technician was joyously delivering a savage kick to the posterior of his superior, the Chief Roboticist.

Becoming aware of his child's presence, Kor colored a deeper peppermint and coiled his leg back in its normal position. He hastily informed his son that this Chief Roboticist was not the real one. It was the first experimental model of an F. E. G.



The F. E. G., a roboticized replica of a hated individual, was to be a psychic safety valve, a harmless outlet for emotions repressed because of danger of reprisal.

Kor explained that the use of the F. E. G. differed from that to which witch doctors once put wax dolls. Unlike the witch doctors' suggestible victims, the original would not know that his enemy was subjecting his image to indignities.

Kor smiled at his son and wondered if the child understood.

His son smiled back. It was the warm, coaxing smile that always turned each of Kor's hearts over. "Please, Daddy," the child said, "make me one of you."

Hickey's Mistake: an act with serious consequences, paradoxically the result of the very knowledge that such an act has such serious consequences.

GEORGE Matthew Hickey (2743-2765 Unified Era) was a Terran archeologist. It was on a field trip to Planet 32B796 that he made the error which has perpetuated his name.

Hickey seems to have been quite inexperienced. Records indicate that he arrived with only six weeks' supplies, although he intended to stay three months. However, that was not Hickey's Mistake, for there was always the practical possibility of living off the land. Besides, as later events proved, Hickey required only two weeks' supplies.

At that time, the natives of Planet 32B796 had a culture similar to that of Earth's Middle Paleolithic man. This fact caused Hickey's study of the daily life of the natives to be brief, inasmuch as the routine was a simple struggle for survival. Hickey soon turned his attention to uncovering a burial mound.

That, however, was not Hick-

ey's Mistake, for the natives permitted outsiders to intrude in exchange for some of the gaudier products of Galactic civilization.

In the opened graves, Hickey found tools buried with the dead. (Middle Paleolithic man had also buried tools with the dead.) This excited Hickey—it apparently proved the existence of a rigid pattern of development for humanoid life.

However, that was not Hickey's Mistake, although the subsequent work of Steiner has shattered that theory.

Hickey's notes end here, but we may reconstruct what followed. Hickey used gestures to question the natives. He asked if they currently buried tools with their dead. They shook their heads. Yet the burials had been fairly recent. Hickey, therefore, rashly accused the natives of lying.



That was not Hickey's Mistake, however, for the natives who had gathered about him took the accusation in good spirit. They found humor in the outsider's in-

ability to see what was so plain to them. They managed to explain to Hickey that they did not bury the tools with the dead. It was, indeed, the reverse. When someone accidentally broke or destroyed a tool, it was the tool they buried. Their custom was to entomb the tool-breaker with the tool.

This revelation stirred Hickey deeply. So deeply that, in his eagerness to record it, he bore down too heavily on his pen and broke it.

That was Hickey's Mistake.

Hsilgne: a message which contains more information than the sender realizes, yet less than the receiver requires.

ON 23day, 2416 Unified Era, the robutler of Prof. Ian Heath (b. 2351) found his employer dead in the laboratory of the professor's London, Terra, home. The body lay beside a small pile of ashes and a large heap of battered machinery. Two objects had fallen from the professor's grasp—a vial of poison and a note. This is what the note says:

"I am taking my own life. It is because the discovery that ought to have proved the prime achievement of my career has turned out to be my supreme failure. I am sorry that, in my first re-

action, I destroyed the machine and my formulae. I should have allowed them to stand, to perpetuate Heath's Folly.



"My purpose was to construct a device that would set up an *implosion vortex*. I believed that such an effect would twist matter out of the matrix of our universe and into a different form of existence.

"Looking back, it seems foolish that I should have chosen to begin the experiment with myself as guinea pig. But I was eager to experience another state of being, however fleeting, and my formulae indicated a safety margin.

"So I started the machine, set the implosion vortex for a duration of one-thousandth of a second Terran and stepped into its focus. I waited. Nothing happened. I felt no change, no sensation whatever.

"I stepped out. My machine hummed most impressively. I had rechecked my formulae countless times. The only error, therefore, was my premise of an implosion vortex.

"And so I bid the Universe farewell. Perhaps I shall experience another state of being, after all. Or is the belief only another Heath's Folly?"

The above note is on exhibition at London Museum. It faces a mirror so visitors may read it more easily.

Manny: to alter the perspective of past events.

LABORIOUS research has traced this term back to the first recorded empirical proof of the co-existence of space-time continua.

On October 12, 1954, at approximately seven minutes past four P. M., there occurred the temporal and spatial displacement of the newsstand located at the northwest corner of 57th Street and Madison Avenue in New York City, Terra. Manny Freeman, the proprietor and operator of the newsstand, being within the newsstand at the time, perforce accompanied it upon its journey.

Extracts from a transcription of Manny's own words follow.

"Whoosh! I feel myself gettin' dizzy. I hear a customer holler, 'Hey, hold on! How about my change?' And then Fifty-seventh and Madison is gone and me and the stand is settin' in a kind of courtyard. I seen four or five big

—what I mean, big!—*things*. But it was like they was made outa smoke."



A question, directed at himself, took shape in his head. "Why has your world spewed you hither?"

Manny sensed that the question really emanated from one of the forms confronting him.

"Look," Manny said, "I din ast to come here. All I know is, one minute I'm sellin' papers, next minute it's like I'm dreamin'. I gotta get back. Look, I just got in a pile of extras . . ."

He picked up a paper and showed them the headline.

GIANTS MASSACRE YANKS

Manny describes himself as becoming somewhat agitated.

"Hey!" he said. "That's impossible! The Yanks was leadin' the Giants twelve to four at the end of the sixth. Then there was a lot of excitement and they called the game for some reason. A bunch of customers come over right then, so I din catch the reason."

Manny recalls that at this point he seemed to hear voices conversing in his brain: "He speaks truth." "This means that there is a temporal cancer which will spread unless we immediately restore maximum probability."

That is all Manny can tell us of the parallel continuum. Again his senses reeled.

At about seven and one-quarter minutes past four, the newsstand reappeared in its normal location and Manny gave the indignant customer his rightful change.

And approximately one hour earlier, at Yankee Stadium, several gigantic forms suddenly materialized and loomed menacingly above the Yankee dugout.

Toting aspic to Terra: engaging in an unprofitable venture.

THIS phrase derives from the circumstance that Prof. Argus Bentley (1961-1989), 1988 Nobel Prize winner in Chemistry, independently provided the solution to Terra's pressing food problem.

On March 11, 1987, while ostensibly on a fishing cruise off Key West, Prof. Bentley surreptitiously jettisoned a weighted parcel. On March 17, the British superliner *Queen Alexandria* logged a sluggish transatlantic crossing of 22 hours 18 minutes. Investigation exonerated the Irish chief engineer.

A multitude of evidence pointed to one staggering conclusion: the oceans were jelling into a firm, viscous mass. Further investigation verified that the land areas of Terra were surrounded by highly nutritious aspic.

On March 25, Prof. Bentley dramatically revealed to the world that this historic transformation had been brought about by his genius and initiative. He revealed that he had set off a self-sustaining colloidal process, initially involving thermite, ocean pressure and a catalyst which he had discovered.



On April 1, Prof. Bentley was appointed American member of the Aspic Trusteeship Commission of the United Nations. The ATC successfully engineered the diversion of rivers into mid-continental reservoirs, licensed aspic-mining operations and supervised distribution of aspic.

On June 16, 1989, Prof. Bentley was one of fourteen persons fatally injured in Le Havre when a bomb exploded during ceremonies honoring him.

The murderer, who was never apprehended, was suspected of being a chef who objected to the manner in which France was garnishing its coastal aspic.

Zaslin: embracing eagerly, but without feelings of ardent affection

FEN Zaslin (3660-3772) was a Callistan biologist. In 3695, he married a beautiful young Martian. Despite his marked display of possessive jealousy, their relationship seems to have been a happy one the first four years.

In 3699, Zaslin was drafted for a two-year tour of duty aboard a Solar Expeditionary Service vessel. Early in the morning of the day of departure, Zaslin's wife awoke suddenly, startled by a labial sensation.

She discovered Zaslin in the act of applying a salve to her lips.

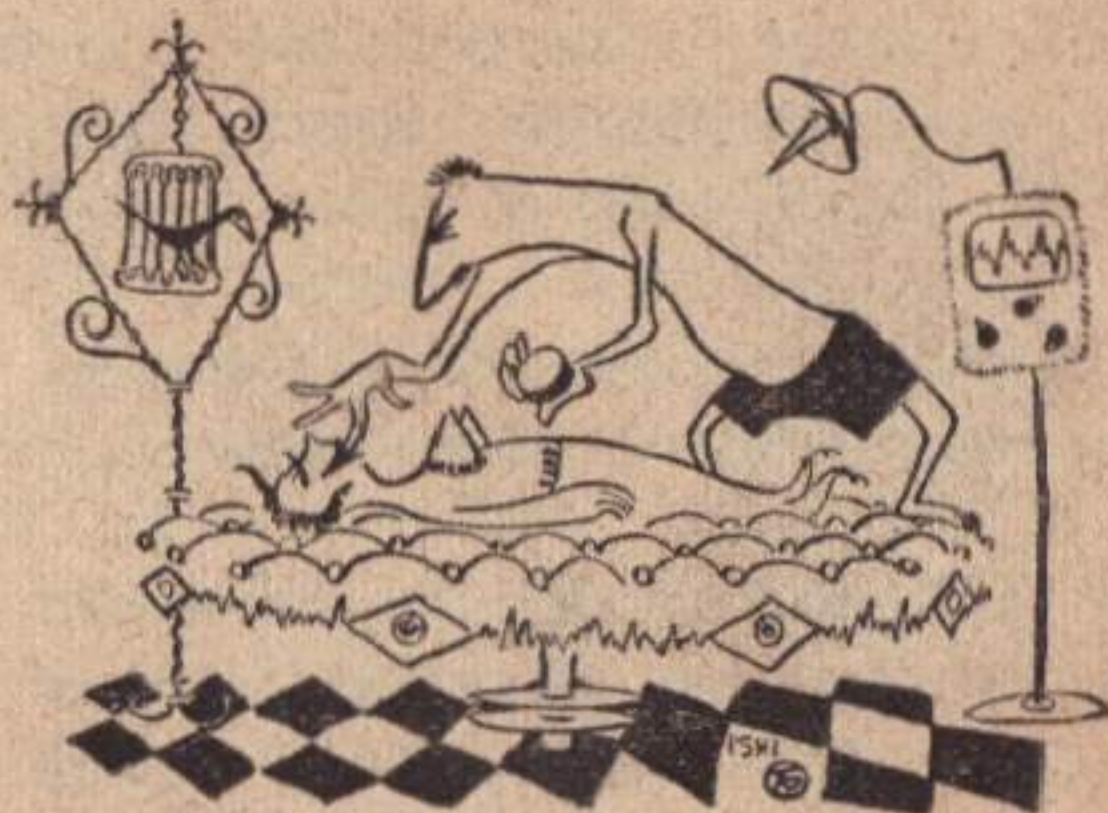
With an admixture of embarrassment and defiance, he explained that he had developed a repellent that would make it impossible for her lips to meet those of another being.

Zaslin's wife laughed affectionately at what she termed his lovable foolishness and attempted to brush his cheek with her lips. To her surprise, she found her lips curling back, away from his flesh.

Good-naturedly, she substituted a fond farewell hug for a kiss.

Zaslin departed, promising that upon his return he would coat his lips with a nullifying agent so that he might, like the Prince Charming of the Terran myth, awaken his Sleeping Beauty with a kiss.

Zaslin's wife was on hand when the SES vessel returned. Sighting his familiar figure descending the ramp, she eagerly jostled her way through the welcoming crowd and ran toward him. She clung to him and pressed her lips tightly to his.



Finally she broke away and released a heartfelt sigh.

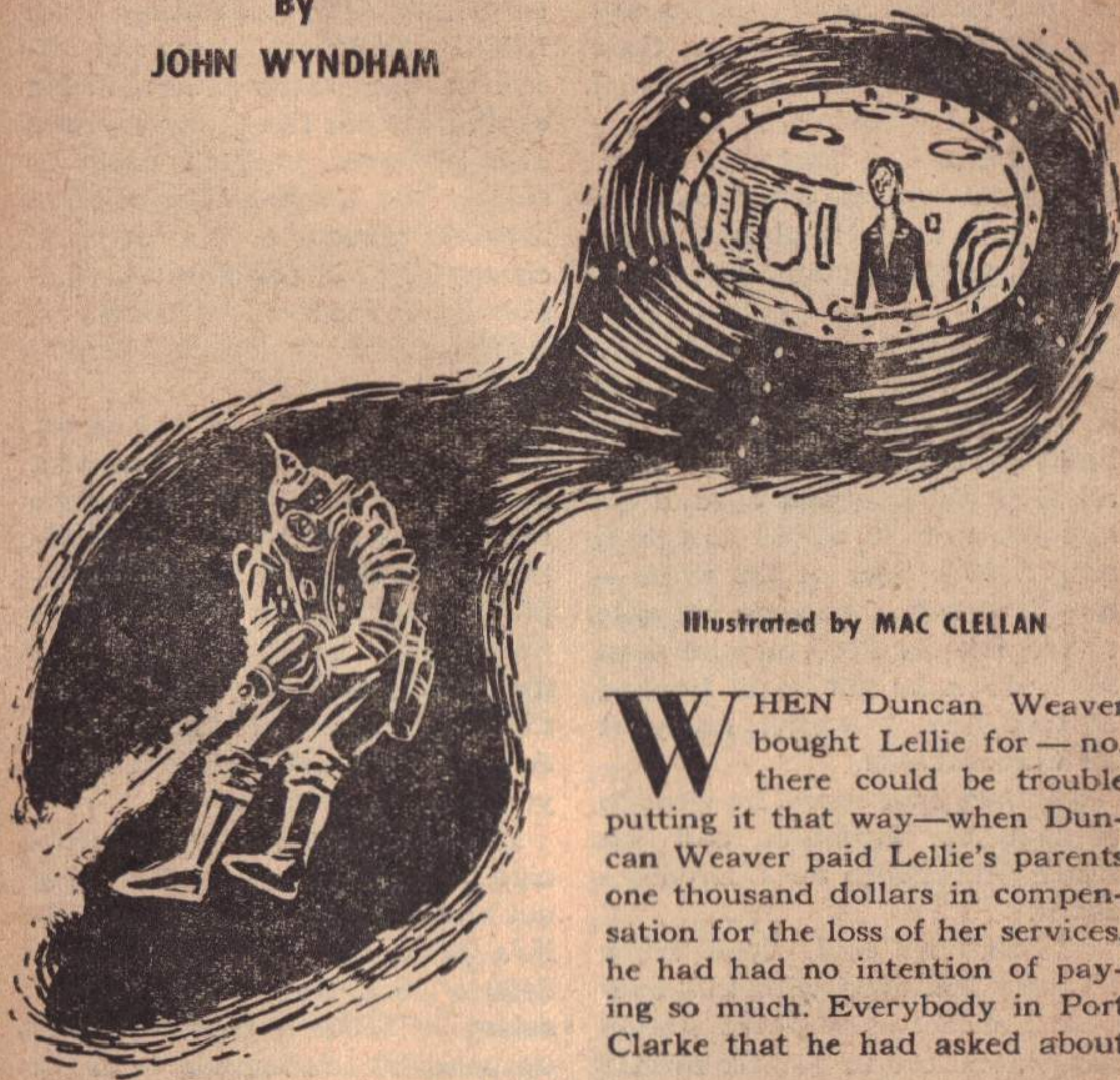
Then she administered a resounding slap to Zaslin's face, automatically divorcing him, and rushed to the spaceport restaurant.

There she ended two years of enforced vegetarianism by devouring a thick, juicy steak.

—EDWARD WELLEN

DUMB MARTIAN

By
JOHN WYNDHAM



Illustrated by MAC CLELLAN

WHEN Duncan Weaver bought Lellie for — no, there could be trouble putting it that way—when Duncan Weaver paid Lellie's parents one thousand dollars in compensation for the loss of her services, he had had no intention of paying so much. Everybody in Port Clarke that he had asked about

When Duncan took Lellie for company he knew it might help preserve his sanity. But what got him wasn't the upkeep—it was the cost!

it assured him six or seven hundred would be a fair price. But when he got up-country, it hadn't turned out quite as simple as the Port Clarkers seemed to think.

The first three Martian families he had tackled hadn't shown any disposition to part with their daughters at all. The next wanted \$1500, and wouldn't budge. Lellie's parents had started at \$1500, too, but they came down to \$1000 after he'd made it plain that he wasn't going to stand for extortion.

On the way back to Port Clarke with her, when he came to work it out, he found himself not so badly pleased with the deal, after all. Over the five-year term of his appointment, it would cost him only \$200 a year at the worst—that is to say, if he were not able to sell her for \$400, maybe even \$500, when he got back. Looked at that way, it wasn't really at all unreasonable.

In town once more, he went to explain the situation and get things all set with the Company's agent.

"Look," he said, "you know the way I'm fixed with this five-year contract as wayload station superintendent on Jupiter IV/II? Well, the ship that takes me there will be traveling light to pick up cargo. So how about another reservation on her?" He had already taken the precau-

tionary step of finding out that the Company was accustomed to grant an extra passage in such circumstances, though not compelled to.

The Company's agent was not surprised. After consulting some lists, he said that he saw no objection to an extra passenger. He explained that the Company was also prepared in such cases to supply the extra ration of food for one person at the nominal charge of \$200 per annum, payable by deduction from salary.

"What? A thousand bucks?" Duncan exclaimed.

"Well worth it," said the agent. "It is nominal for the rations, because it's worth the Company's while to lay out the rest for something that helps to keep an employee from going nuts. That's pretty easy to do when you're fixed alone on a wayload station, they tell me—and I believe them. A thousand's not high if it helps you avoid a crackup."

Duncan argued a bit, on principle, but the agent had the thing cut and dried. It meant that Lellie's price went up to \$2000—\$400 a year. Still, with his own salary at \$5000 a year, tax-free, unspendable during his term on Jupiter IV/II, and piling up nicely, it wouldn't come to such a big slice. So he agreed.

"Fine," said the agent. "I'll fix it, then. All you'll need is an

embarkation permit for her, and they'll grant that automatically on production of your marriage certificate."

Duncan stared. "Marriage-certificate? Me marry a Mart?" The agent shook his head reprovingly. "No embarkation permit without it. Anti-slavery regulation. They'd think you meant to sell her—might even think you'd bought her."

"What me?" Duncan said indignantly.

"Even you," said the agent. "A marriage license will only cost you another ten dollars—unless you've got a wife back home, in which case it'll likely cost you a bit more later on."

Duncan shook his head. "I've got no wife."

"Uh-huh," said the agent, neither believing nor disbelieving. "Then what's the difference?"

Duncan came back a couple of days later, with the certificate and the permit. The agent looked them over.

"That's okay," he agreed. "I'll confirm the booking. My fee will be one hundred dollars."

"Your fee?"

"Call it safeguarding your investment," suggested the agent.

The man who had issued the embarkation permit had required one hundred dollars, too. Duncan did not mention that now, but he said, with bitterness: "One dumb

Mart's costing me plenty."

"Dumb?" asked the agent, looking at him.

"Speechless plus. These hick Marts don't know they're born."

"H'm," said the agent. "Never lived here, have you?"

"No, but I've laid-over here a few times."

The agent nodded. "They act dumb, and the way their faces are makes them look dumb. But they were a mighty clever people, once."

"Once could be a long time ago."

"Long before we got here, they'd given up bothering to think a lot. Their planet was dying and they were kind of content to die with it."

"Well, I call that dumb. Aren't all planets dying, anyway?"

"Ever see an old man just sitting in the Sun, taking it easy? It doesn't have to mean he's senile. It may, sure, but very likely he can snap out of it, and put his mind to work again if it really becomes necessary. But mostly he finds it not worth the bother. Less trouble just to let things happen."

"Well, this one's only about twenty—say ten and a half of your Martian years—and she certainly lets 'em happen. And I'd say it's a kind of acid test for dumbness when a girl doesn't know what goes on at her own

wedding ceremony."

And then, on top of that, it turned out to be necessary to lay out yet another hundred dollars on clothing and other things for her, bringing the whole investment up to \$2310. It was a sum which might possibly have been justified on a really smart girl, though on Lellie . . .

But there it was. Once you made the first payment, you either lost on it, or were stuck for the rest. And, anyway, on a lonely wayload station, even she would be company—of a sort.

THE First Officer called Duncan into the navigating room to take a look at his future home.

"There it is," he said, waving his hand at a little world shown on the watch-screen.

Duncan looked at the jagged-surfaced crescent. There was no scale to it. It could have been the size of Luna or of a basketball. Whatever size the place proved to be, it was still just a lump of rock, turning slowly over.

"How big?" he asked.

"Around forty miles mean diameter."

"What'd that be in gravity?"

"Haven't worked it out. Call it slight, figure there isn't any, and you'll be near enough."

"Uh-huh," said Duncan.

On the way back to the mess-room, he paused to put his head

into the cabin. Lellie was lying on her bunk, with the spring-cover fastened over her to give some illusion of weight. At the sight of him she raised herself on one elbow.

She was small, not much over five foot. Her face and hands were delicate; they had a fragility which was not simply a matter of frail bone-structure. To an Earthman, her eyes looked unnaturally round, seeming to give her a permanent expression of innocence surprised. The lobes of her ears hung unusually low out of a mass of brown hair that glinted with red among its waves. The paleness of her skin was emphasized by the color on her cheeks and the vivid red on her lips.

"Hey," said Duncan, "you can start packing up the stuff now."

"Packing up?" she repeated doubtfully, in a curiously resonant voice.

"Sure, pack," Duncan told her. He demonstrated by opening a box, cramming some clothes into it, and waving a hand to include the rest. Her expression did not change, but the idea got across.

"We are come?" she asked.

"We are nearly come, so get busy on this lot."

"Yith—okay," she said, and began to unhook the cover.

Duncan shut the door, and gave a shove which sent him floating down the passage lead-

ing to the general mess and living room.

Inside the cabin, Lellie pushed away the cover. She reached down cautiously for a pair of metal soles, and attached them to her slippers by their clips. Still cautiously holding on to the bunk, she swung her feet over the side and lowered them until the magnetic soles clicked into contact with the floor. She stood up more confidently.

The brown overall suit she wore revealed proportions that might be admired among Martians, but, by Earth standards, they were not classic. Because of the thinner air of Mars, her chest was big. But only her chest. That, of course, was to accommodate her greater lung capacity. The rest of her was almost childishly slender.

Still ill at ease with weightlessness, she slid her feet to keep magnetic contact with the metal floor as she crossed the room. For some moments she paused in front of a wall mirror, contemplating her reflection. Then she turned away and began packing.

"ONE hell of a place to take a woman to," Wishart, the ship's cook, was saying as Duncan came in.

Duncan did not care a lot for Wishart, chiefly because, when it had occurred to him that Lellie

ought to have some lessons in weightless cooking, Wishart had refused to give the tuition for less than fifty dollars, and thus increased the investment cost to \$2360. Nevertheless, it was not Duncan's way to pretend to have misheard.

"One hell of a place to be given a job," he amended grimly.

No one replied to that. They knew how men came to be offered wayload jobs.

It was not necessary, as the Company frequently pointed out, for superannuation at the age of forty to come as a hardship to anyone. Salaries were good, and the Company could cite plenty of cases where men had founded brilliant subsequent careers on the savings of their space-service days. That was all right for the men who had not been obsessively interested in the fact that one four-legged animal can run faster than another. But this was not even an enterprising way to have lost one's money, so when it came to Duncan's time to leave crew work, they made him no more than the routine offer.

He had never been to Jupiter IV/II, but he knew just what it would be like—it was the second moon of Callisto, which was the fourth moon, in order of discovery, of Jupiter, and would inevitably be one of the grimmer kinds of cosmic pebble.

The Company had offered no alternative, so he signed up at the usual terms: \$5000 a year for five years, and board and lodging, plus five months waiting time on half-pay before he could get there, plus six months afterward, also on half-pay, during "readjustment to gravity."

It meant the next six years taken care of; five of them entirely without expenses, and a nice little sum at the end.

The problem was: could you get through five years of isolation without cracking up? Even when the psychologists had okayed you, you couldn't be sure. Some could; others went to pieces in a few months and had to be taken off, gibbering. If you got through two years, they said, you'd be okay for five. But the only way to find out was to try.

"What about my putting in the waiting time on Mars? I could live cheaper there," Duncan had suggested.

They had consulted planetary tables and ship schedules, and discovered that it would be cheaper for them, too. They had declined to split the difference on the saving thus made, but they had booked him a passage for the following week, and arranged for him to draw, on credit, from the Company's agent there.

The Martian colony in and around Port Clarke was rich in

ex-spacemen who found it more comfortable to spend their rear-guard years in the lesser gravity, broader morality, and greater economy there. They were great advisers. Duncan listened, but discarded most of it. Such methods of occupying oneself as learning the Bible or the works of Shakespeare by heart, or copying out three pages of the Encyclopaedia every day, or building model spaceships in bottles, struck him not only as tedious, but probably would drive him insane more quickly. The only one with sound practical advantages, in his opinion, had led him to picking Lellie to share his exile, and he still thought it was a sound one, in spite of its costing \$2360.

He was well enough aware of the general opinion about it to refrain from adding a sharp retort to Wishart. Instead, he conceded: "Maybe nobody ought to take a *real* woman to a place like that. But a Mart's different."

"Even a Mart—" Wishart began, but he was cut short by finding himself drift across the room as the arrestor tubes began to fire.

Conversation ceased as everybody turned to on securing all loose objects.

JUPITER IV/II was, by definition, a sub-moon, probably a captured asteroid. The surface

was not cratered, like Luna's; it was simply a waste of jagged, riven rocks. The satellite as a whole had the form of an irregular ovoid, a bleak, cheerless lump of stone splintered off some vanished planet, with nothing whatever to commend it but its situation.

There had to be wayload stations, for it would be hopelessly uneconomic to build big ships capable of landing on the major planets. A few of the older and smaller ships had actually been built on Earth, and so had to be launched from there, but the very first large, Moon-assembled ship established a new practice. Ships became truly spaceships and were no longer built to stand the strains of high gravitational pull. They began to make their voyages, carrying fuel, stores, freight, and changes of personnel, exclusively between satellites. The newer types did not put in even at Luna, but used the artificial satellite, Pseudos, exclusively as their Earth terminal.

Freight between the wayload stations and their primaries was customarily consigned in powered cylinders known as crates; passengers were ferried back and forth in small rocket ships. Stations such as Pseudos, or Deimos, the main wayload for Mars, handled enough work to keep a crew busy, but in the outlying, little

developed posts one man who was part handler, part watchman was enough. Ships visited them infrequently. On Jupiter IV/II one might, according to Duncan's information, expect an average of one every eight or nine Earth months.

The ship continued to brake, coming in on a spiral, adjusting her speed to that of the satellite. The gyros started up to give stability. The small, jagged world grew until it overflowed the watch-screens. The ship was maneuvered into a close orbit. Miles of featureless, formidable rocks slid monotonously beneath her.

The station site came onto the screen from the left—a roughly leveled area of a few acres, the first and only sign of order in the stony chaos. At the far end was a pair of hemispherical huts, one much larger than the other. At the near end, a few cylindrical crates were lined up beside a launching ramp hewn from the rock. Down each side of the area stood rows of canvas bins, some stuffed full to a conical shape, others slack, partly or entirely empty. A huge parabolic mirror was perched on a crag behind the station, looking like a monstrous, formalized flower.

In the whole scene, there was only one sign of movement—a small space-suited figure pranc-

ing madly about on a metal apron in front of the larger dome, waving its arms in a wild welcome.

Duncan left the screen and went to the cabin. He found Lellie fighting off a large case which, under the influence of deceleration, seemed determined to pin her against the wall. He shoved the case aside and pulled her out.

"We're there," he told her. "Put on your spacesuit."

Her round eyes ceased watching the case and turned toward him. There was no telling from them how she felt, what she thought. She said, simply:

"Thpacethuit. Yith—okay."

STANDING in the airlock of the dome, the outgoing superintendent paid more attention to Lellie than to the pressure dial. He knew from experience exactly how long equalizing took, and opened his faceplate without even a glance at the pointer.

"Wish I'd had the sense to bring one," he observed. "Could have been mighty useful on the chores, too."

He opened the inner door, and led through.

"Here it is—and welcome to it," he said.

The main living room was oddly shaped by reason of the dome's architecture, but it was spacious. It was also exceedingly, sordidly untidy.

"Meant to clean up, never got around to it," he added. He looked at Lellie. There was no visible sign of what she thought of the place. "Never can tell with Marts," he said uneasily. "They kind of non-register."

Duncan agreed: "I figured this one was astonished at being born, and never got over it."

The other man went on looking at Lellie. His eyes strayed from her to a gallery of pinned-up terrestrial beauties, and back again.

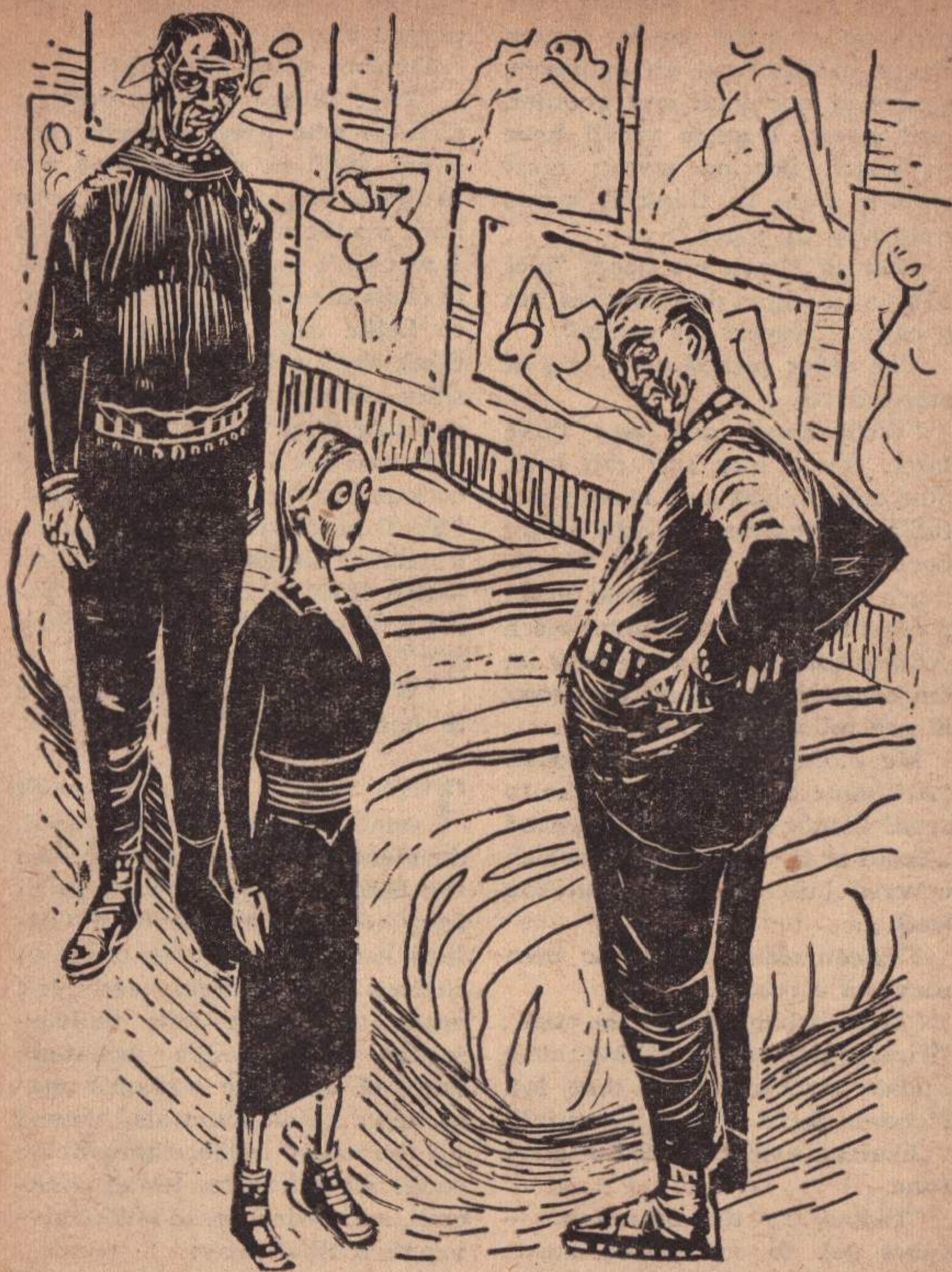
"Sort of funny shape Marts have," he said, musingly.

"This one's considered a good enough looker where she comes from," Duncan told him, a trifle shortly.

"Sure. No offense, bud. I guess they'll all seem a funny shape to me after this spell." He changed the subject. "I'd better show you the ropes around here."

Duncan signed to Lellie to open her faceplate so she could hear him, and then told her to get out of her suit.

The dome was the usual type: double-floored, double-walled, with an insulated and evacuated space between the two, constructed as a unit and held down by metal bars let into the rock. In the living quarters there were three more sizable rooms, able to cope with increased personnel if trade should expand.



"The rest," the outgoing man explained, "is the regular station stores, mostly food, air-cylinders, spares of one kind and another, and water. I guess you'll have to watch her on water; most women seem to think it grows naturally in pipes."

Duncan shook his head. "Not Marts. Living in deserts gives 'em a natural respect for water."

The other picked up a clip of store-sheets.

"We'll check and sign these later. It's a nice soft job here. The only freight now is rare metalliferous earths. Callisto hasn't been opened up a lot yet. Handling's easy. They tell you when a crate's on the way; you switch on the radio beacon to bring it in. On dispatch, you can't go wrong if you follow the tables."

He looked around the room. "All home comforts. You like to read? Plenty of books." He waved a hand at the packed rows which covered half the inner partition wall.

Duncan said he'd never been much of a reader.

"Well, it helps," said the other. "Find pretty well anything that's known somewhere in that lot. Records there. Fond of music?"

Duncan said he liked a good tune.

"Better try the other stuff—tunes get to squirreling inside your head. Play chess?" He

pointed to a board, with the men pegged into it.

Duncan shook his head.

"Pity. There's a fellow over on Callisto who plays a pretty hot game. He'll be disappointed not to finish this one. Still, if I was fixed up the way you are, maybe I wouldn't have been interested in chess myself." His eyes strayed to Lellie again. "What do you think she's going to do here, besides doing the cooking and amusing you?"

It was not a question that had occurred to Duncan. He shrugged. "She'll be okay, I guess. There's a natural dumbness about Marts—they'll sit for hours on end, doing nothing at all. It's a gift they got."

"Well, it certainly should come in handy here," said the other.

THE regular ship's-call work went on. Cases were unloaded, the metalliferous earth hosed from the bins into the holds. A small ferry rocket came up from Callisto carrying a couple of time-expired prospectors, and left again with their two replacements. The ship's engineers checked over the station's machinery, made renewals, topped up the water tanks, charged the spent air-cylinders, tested, tinkered, and tested again before giving their final okay.

Duncan stood outside on the

metal apron where, not long ago, his predecessor had performed his fantastic dance of welcome, to watch the ship take off. She rose straight up, with her under jets pushing her gently. The curve of her hull became an elongated crescent shining against the black sky. The main driving jets started to gush white flame edged with pink. Quickly she picked up speed. Before long she had dwindled to a speck which sank behind the ragged skyline.

Quite suddenly Duncan felt as if he, too, had dwindled. He had become a speck upon a barren mass of rock which was itself a speck in the immensity. The indifferent sky about him had no scale. It was an utterly black void wherein suns flared perpetually, without reason or purpose.

The rocks of the satellite, rising up in their harsh crests and ridges, were without scale, too. He could not tell which were near and which were far away; he could not, in the jumble of hard-lit planes and inky shadows, even make out their true form. There was nothing like them to be seen on Earth or Mars. Their unweathered edges were sharp as blades; they had been just as sharp as that for millions upon millions of years, and would be for as long as the satellite existed.

The unchanging eons seemed

to stretch out before and behind him. All life was a speck, a briefly transitory accident, utterly unimportant to the universe, a queer little note dancing for a short moment in the light of the eternal suns. Reality was just globes of fire and balls of stone senselessly rolling along through emptiness, through time unimaginable.

Within his heated suit, Duncan shivered a little. Never before had he been so alone, never so much aware of the vast, callous, futile loneliness of space. Looking out into the blackness, with light that had left a star a million years ago shining into his eyes, he wondered: "What the heck's it all about, anyway?"

The sound of his own unanswerable question broke up the mood. He shook his head to clear it of speculative nonsense. He turned his back on the Universe, reducing it again to its proper status as a background for life in general and human life in particular, and stepped into the airlock.

AS his predecessor had told him, the job was soft. Duncan made his radio contacts with Calisto at pre-arranged times. Usually it was little more than a formal check on one another's continued existence, with perhaps an exchange of comment on the radio news. Only occasionally did

they announce a dispatch and tell him when to switch on his beacon. Then, in due course, the cylinder crate would make its appearance and float slowly down. It was quite a simple matter to couple it up to a bin to transfer the load.

The satellite's day was too short for convenience, and its night, lit by Callisto, and sometimes by Jupiter as well, was almost as bright; so they disregarded it and lived by the calendar clock which kept Earth time on the Greenwich Meridian setting. At first, much of the time had been occupied in disposing of the freight that the ship had left. Some of it went into the main dome—necessities for themselves, and other items that would store better where there was warmth and air, some into the small, airless, unheated dome. The greater part was stowed and padded carefully into cylinders and launched off to the Callisto base. But once that work had been cleared, the job was certainly soft, too soft . . .

Duncan drew up a program. At regular intervals he would inspect this and that, he would leap almost weightlessly up to the crag, check on the Sun motor there, and so forth. But keeping to an unnecessary program requires resolution.

Sun motors, for instance, were

built to run for a long time without attention. The only action one could take if theirs stopped would be to call Callisto for a ferry rocket to come and take Lellie and himself off until a ship arrived to repair it. A breakdown there, the Company had explained very clearly, was the only thing that would justify him in leaving his station, with the stores of precious earths, unmanned (and it was also indicated that to contrive a breakdown for the sake of a change was unlikely to prove worthwhile).

One way and another, the program did not last very long.

There were times when Duncan found himself wondering whether bringing Lellie had been such a good idea, after all. On the purely practical side, he would not have cooked as well as she did, and probably have pigged it quite as badly as his predecessor had, but if she had not been there, the necessity of looking after himself would have given him something to do. And even from the standpoint of company—well, she was that, of a sort, but she was alien, queer; kind of like a half-robot, and dumb at that; certainly no fun.

There were times—increasingly frequent times—when the very look of her irritated him intensely. So did the way she moved, and her gestures, and her silly

pidgin-talk when she talked, *and* her self-contained silence when she didn't, *and* her remoteness, *and* all her differentness, *and* the fact that he would have been \$2360 better off without her.

Nor did she make a serious attempt to remedy her shortcomings, even where she had the means. Her face, for instance. You'd think any girl would try to make her best of that—but did she? There was that left eyebrow again; it made her look like a drunken clown, but a lot she cared . . .

"For heaven's sake," he told her once more, "put the cockeyed thing straight. Don't you know how to fix 'em yet? And you've got your color on wrong, too. Look at that picture—now look at yourself in the mirror: a smear of red all in the wrong place. And your hair, too, getting like seaweed again. You've got the things to wave it, so stop looking like a damned mermaid. I know you can't help being a dumb Mart, but you can at least *try* to look like a real woman."

Lellie studied the colored picture, and then compared her reflection with it, critically.

"Yith—okay," she said with compliant detachment.

Duncan snorted. "And that's another thing. It's not 'yith,' it's 'yes.' Y-E-S, yes. Say 'yes.'"

"Yith," said Lellie, obligingly.

"Oh, for—Can't you *hear* the difference? S-s-s, not th-th-th. Ye-sss."

"Yith," she said.

"No. Put your tongue further back like this—"

The lesson went on for some time. Finally he grew angry.

"Just making a monkey out of me, huh? You'd better be careful! Now, say 'yes.'"

She hesitated, looking at his wrathful face.

"Go on, say it!"

"Y-yeth," she tried, nervously.

His hand slapped across her face harder than he had intended. The jolt broke her magnetic contact with the floor and sent her sailing across the room in a spin of arms and legs. She struck the opposite wall and rebounded, to float helplessly, out of reach of any hold. He strode after her, turned her right way up, and set her on her feet. His left hand clutched her overall in a bunch, just below her throat, his right fist raised.

"Again!" he told her.

Her eyes looked helplessly this way and that. He shook her. She tried. At the sixth attempt she managed: "Yeths."

He accepted that for the time being.

"You can do it, you see, when you try! Well, you're damn well going to try!"

He let her go. She tottered

across the room, holding her hands to her bruised face.

A number of times, while the weeks stretched so slowly into months, Duncan found himself wondering whether he was going to hold out. He lingered over what work there was as long as he could, but it left still too much time hanging on his hands.

A middle-aged man who had read nothing longer than an occasional magazine article, Duncan did not take to books. He tired very quickly of the popular records, as his predecessor had prophesied, and could make nothing of the others. He taught himself the moves in chess from a book, and instructed Lellie in them, intending after a little practice with her to challenge the man on Callisto. Lellie, however, managed to win so consistently that he suspected he did not have the right kind of mind for the game. Instead, he taught her a kind of double-solitaire, but that didn't last long, either—the cards always seemed to run for Lellie.

Occasionally, some news and entertainment were to be had from the radio. But with Earth somewhere around the other side of the Sun just then, Mars screened off half the time by Callisto, and the rotation of the satellite itself, reception was either impossible or badly distorted.

So mostly he sat and fretted, hating the satellite, angry with himself, and irritated by Lellie.

Just the phlegmatic way she went on with her tasks infuriated him. It seemed unfair that she could take it all better than he could simply because she was a dumb Mart. When his ill-temper became vocal, the look of her as she listened exasperated him still more.

"For God's sake," he told her one time, "can't you make that silly face of yours mean something? Can't you laugh, or cry, or get mad—anything? It's enough to drive a guy nuts, looking at a face like a doll that just heard its first dirty story. I know you can't help being dumb, but get some expression into it."

She went on looking at him without a shadow of a change.

"Go on, you heard me! Smile, damn you! *Smile!*"

Her mouth twitched very slightly.

"Call that a smile? Now, there's a smile!" He pointed to a pin-up with a smile like a piano keyboard. "Like that! Like this!" He grinned widely.

"No," she said. "My face cannot wriggle like Earth faces."

"Wriggle?" he repeated incensed. "Wriggle, you call it?" He freed himself from the chair's spring-cover and came toward her. She backed away until she

was pressed against the wall. "I'll make yours wriggle. Go on, now—smile!"

He lifted his fist.

Lellie put her hands up to her face.

"No!" she protested. "No—no—no!"

IT was on the day Duncan marked off the eighth completed month that Callisto relayed news of a ship on the way. A couple of days later, he was able to make contact with her himself and confirm her arrival in about a week.

He felt as if he had been given several stiff drinks. There were preparations to make, stores to check, deficiencies to note, a string of nil-nil-nil entries to be made in the log to bring it up to date.

He bustled around as he got on with the job. He hummed to himself while he worked, and even ceased to be annoyed with Lellie. The effect of the news upon her was imperceptible—but, then, what else could you expect?

Sharp on her estimated time, the ship hung above them, growing slowly larger as her upper jets pressed her down. The moment she was berthed, Duncan went aboard, with the feeling that everyone in sight was an old friend.

The captain received him

warmly and brought out the drinks. It was all routine—even Duncan's babbling and slightly inebriated manner was regular procedure in the circumstances. The only departure from pattern came when the captain introduced a man beside him.

"We've brought a surprise for you, Superintendent. This is Doctor Whint. He'll be sharing your exile for a bit."

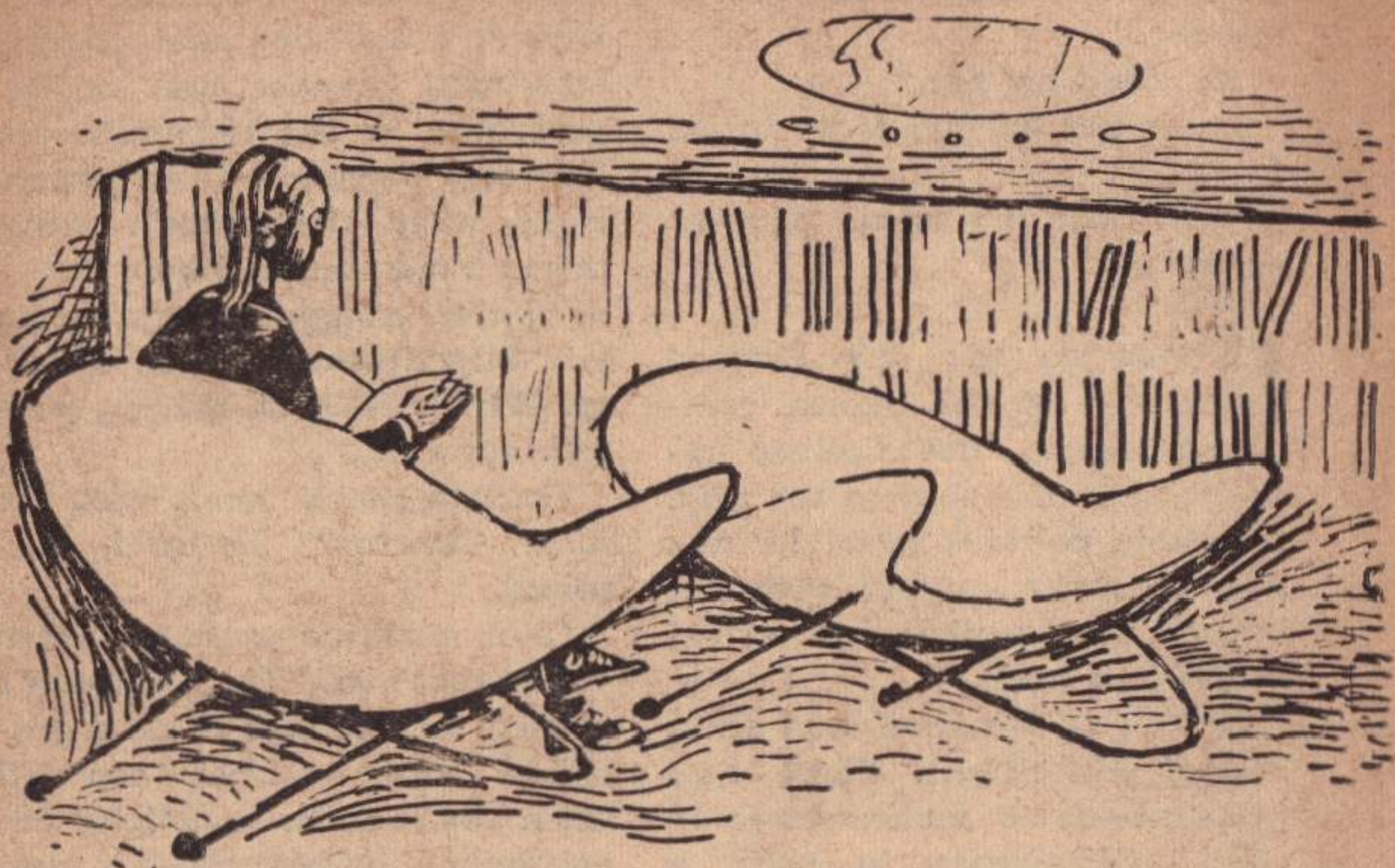
Duncan shook hands with the man. "Doctor?" he said, surprised.

"Not medicine—science," Alan Whint told him. "The Company's pushed me out here to do a geological survey—never can tell when you'll strike something important. I'll be here about a year. Hope you don't mind."

Duncan said conventionally that he'd be glad to have some company. Later, he took Whint over to the dome. The geologist was surprised to find Lellie there; clearly, nobody had told him about her. He interrupted Duncan's explanations of the surroundings to say:

"Won't you introduce me to your wife?"

Duncan did so, without grace. He resented the reproving tone in Whint's voice; nor did he care for the way the geologist greeted Lellie just as if she were an Earth-woman. He was also aware that Whint had noticed the bruise on



her cheek, which her makeup did not altogether cover.

In his mind, he classified Alan Whint as one of the smooth, snooty type, and hoped that there was not going to be trouble with him.

On the other hand, he reflected, trouble was better than boredom.

IT was a matter of opinion who made the trouble when it boiled up some three months later. There had already been several occasions when it had lurked uneasily near. Very likely it would have come into the open long before, had Whint's work

not taken him out of the dome so much. The moment of touch-off came when Lellie lifted her eyes from the book she was reading to ask:

"What does 'female emancipation' mean?"

Alan started to explain. He was only halfway through the first sentence when Duncan broke in:

"Listen, pal, who told you to go putting ideas into her head?"

Alan shrugged his shoulders slightly. "Why shouldn't she have ideas? Why shouldn't anyone?"

"You know what I mean."

"I never understand you guys who apparently can't say what



you mean. Try again."

"All right, then. Right from the start, you began shoving your nose into things that aren't your business. Treating her, for instance, as if she was some classy dame back home."

"I'm glad you noticed it."

"And you think I didn't see why?"

"I'm quite sure you didn't. You think, in your simple way, that I'm out to get your girl, and you resent that with all the weight of \$2360. But you're wrong; I'm not."

"My wife," he corrected. "She may be only a dumb Mart, but

she's legally my wife and what I say goes."

"Yes, Lellie is a Mart, as you call it. She may even be your wife, for all I know to the contrary. But dumb, she certainly is not. For one example, look at the speed with which she's learned to read—once someone took the trouble to show her how. I don't think you'd show up any too bright yourself in a language where you only knew a few words, and which you couldn't read."

"It was none of your business to teach her. She didn't need to read. She was all right the way she was. And why? So you'll get

her thinking you're a better man than I am."

"I talk to her the way I'd talk to any woman anywhere—only more simply, since she hasn't had the chance of an education. If she does think I'm a better man, then I agree with her. I'd be sorry if I couldn't."

"I'll show you who's the better man—" Duncan began savagely.

"You don't need to. I knew when I came here that you'd be a waster or you wouldn't be on this job—and it didn't take long for me to find out that you were a lousy bully, too. Do you suppose I haven't noticed the bruises? Do you think I've enjoyed having to listen to you bawling out a girl whom you've deliberately kept ignorant and defenseless when she has potentially ten times the sense you have? Having to watch a clod like you lording it over your 'dumb Mart'? You emetic!"

In the heat of the moment, Duncan could not remember what an emetic was. Trying to remember gave him a chance to realize that he was older, less agile, not as fit as the geologist . . . that he'd probably get hurt more than he could hurt. Besides, Lellie was his wife. What was he getting so angry about?

Both of them simmered, but nothing happened. Somehow the occasion was patched up and

smoothed over.

Alan continued to make his expeditions in the small craft which he had brought with him. He examined and explored other parts of the satellite, returning with specimen pieces of rock which he tested and arranged, carefully labeled, in cases. In his spare time he occupied himself, as before, with teaching Lellie.

That he did it largely for his own occupation, as well as from a feeling that it should be done, Duncan did not altogether deny. But he was equally sure that, in continued close association, one thing leads to another, sooner or later.

So far, there had been nothing between them that he could complain about—but Alan's term still had some nine months to go, even if he were relieved in time. Lellie was already hero-worshipping. And he was spoiling her more every day by this fool business of treating her as if she were an Earthwoman. One day they'd come alive to it—and then they would see him as an obstacle that would have to be removed. Prevention being better than cure, the sensible course was to see that the situation should never develop. There need not be any fuss about it . . .

There was not.

One day Alan Whint took off on a routine flight to prospect

somewhere on the other side of the satellite. He never came back. That was all.

THERE was no telling what Lellie thought about it, but something seemed to happen to her.

For several days, she spent almost all her time standing by the main window of the living room, looking out into the blackness at the flaring pinpoints of light. It was not that she was waiting or hoping for Alan's return—she knew as well as Duncan himself that, when thirty-six hours had gone by, there was no chance of that. She said nothing. Her expression maintained its unchanged exasperating look of slight surprise. Only in her eyes was there any perceptible difference: they looked as if she had withdrawn herself still further behind them.

Duncan could not tell whether she knew or guessed anything. There seemed to be no way of finding out without planting the idea in her mind—if it were not already there. He was, without admitting it fully to himself, too nervous to turn on her viciously for the time she spent vacantly mooning out of the window. He had an uncomfortable awareness of how many ways there were for even a dimwit to contrive a fatal accident in such a place.

As a precaution, he took to

fitting new air-bottles to his suit every time he went out, and checking to see that they were at full pressure. He also took to placing a piece of rock so that the outer door of the airlock could not close behind him. He made a point of noticing that his food and hers came straight out of the same pot, and watched her closely while she worked.

He still could not decide whether she knew, or suspected. After they were sure that Alan was gone, she never once mentioned his name . . .

The mood stayed on her for perhaps a week. Then it changed abruptly. She paid no more attention to the bleakness outside. Instead, she began to read, voraciously and indiscriminately.

Duncan found it hard to understand her absorption in the books, nor did he like it, but he decided for the moment not to interfere. It did, at least, have the advantage of keeping her mind off other things.

Gradually he began to feel easier. The crisis was over. Either she had not guessed, or, if she had, she had decided to do nothing about it. Her addiction to books, however, did not abate. In spite of several reminders by Duncan that it was for company that he had laid out the not inconsiderable sum of \$2,360, she continued, as if determined to

work her way through the station's library.

By degrees, the situation retreated into the background. When the next ship came, Duncan watched her anxiously in case she had been biding her time to hand on her suspicions to the crew. It turned out to be unnecessary. She showed no tendency to refer to the matter.

When the ship pulled out, taking the opportunity with it, he was relievedly able to tell himself that he had really been right all along—she was just a dumb Mart. She had simply forgotten the Alan Whint incident, as a child might.

AS the months of his term ticked steadily away, he found that he had, bit by bit, to revise that estimate of dumbness. She was learning from books things that he did not know himself. It even had some advantages, though it put him in a position he did not care for. When she asked, as she sometimes did now, for explanations, he found it unpleasant to be stumped by a Mart.

Having the practical man's suspicion of book-acquired knowledge, he felt it necessary to explain to her how much of the stuff in them was a lot of nonsense, how they never really came to grips with the problems of life

as he had lived it. He cited examples from his experience.

In fact, he found himself teaching her.

She learned quickly, too—the practical as well as the book stuff. Of necessity, he had to change his opinion of Marts even more. It wasn't that they were altogether dumb, as he had thought, just that they were normally too dumb to start using the brains they had.

Once started, Lellie was a regular vacuum-cleaner for knowledge of all sorts. It didn't seem long before she knew as much about the wayload station as he did himself. Teaching her was not at all what he had intended, but it did provide more occupation than the boredom of the early days. Besides, it had occurred to him that she was an appreciating asset . . .

Funny thing, that. He had never before thought of education as anything but a waste of time, but now it seriously began to look as if, when he got her back to Mars, he might recover quite a bit more of that \$2,360 than he had expected. Maybe she'd make quite a useful secretary to someone.

He started to instruct her in elementary bookkeeping and finance—as much, at least, as he knew about it, which wasn't a great deal.

The months of service kept on piling up, going faster now. During the later stretch, when one had acquired confidence in his ability to get through without cracking up, there was a comfortable feeling about sitting quietly out there with the knowledge of the dollars gradually piling up at home.

A new find opened up on Calisto, bringing a slight increase in deliveries to the satellite. Otherwise, the routine continued unchanged. The infrequent ships called in, loaded up, and went again. And then, surprisingly soon, it was possible for Duncan to say to himself:

"The ship after the next and I'll be through!"

Even more surprisingly, there soon came the day when he stood on the metal apron outside the dome, watching a ship lifting herself off on her under jets and dwindling upward into the black sky, and was able to tell himself:

"That's the last time I'll see that! When the next ship lifts off this dump, I'll be aboard her!"

He stood watching her, one bright spark among the others, until the turn of the satellite carried her below his horizon. Then he turned back to the airlock—and found the door shut.

Once he had seen that there was going to be no repercussion from the Alan Whint affair, he

had dropped his habit of wedging it open with a piece of rock. Whenever he emerged to do a job, he left it ajar, and it stayed that way until he came back. There was no wind or anything else on the satellite to move it.

He laid hold of the latch-lever irritably and pushed. It did not move.

Duncan swore at it for sticking. He walked to the edge of the metal apron, and then around the side of the dome so that he could see in at the window. Lellie was sitting in a chair with the spring-cover fixed across it, apparently lost in thought. The inner door of the airlock was standing open, so, of course, the outer could not be moved. Besides the safety locking device, there was all the dome's air-pressure to hold it shut.

Forgetful for the moment, Duncan rapped on the thick glass of the double window to attract her attention. She could not have heard a sound through there, so it must have been the movement that caught her eye and caused her to look up. She turned her head and gazed at him, without moving.

Duncan stared back at her. Her hair was still waved, but the eyebrows, the color—all the other touches that he had insisted upon to make her look as much like an Earthwoman as possible—were

gone. Her eyes looked back at him, set as hard as stones in that fixed expression of mild astonishment.

Sudden comprehension struck Duncan like a physical shock. He tried to pretend to both of them that he had not understood. He made gestures to her to close the inner door of the airlock. She went on staring back at him, without moving. Then he noticed the book she was holding in her hand, and recognized it. It was not one of the books which the Company had supplied for the station's library. It was a book of verse, bound in blue.

It had once belonged to Alan Whint.

PANIC suddenly jumped out at Duncan as he looked down at the row of small dials across his chest. At least she had not tampered with his air supply; there was pressure enough for thirty hours or so. A touch on the jet sent him floating back to the metal apron, where he could anchor his magnetic boots and think it over.

The dirty Mart! Letting him think all this time that she had forgotten all about it. Nursing it up for him. Letting him work out his time while she planned. Waiting until he was on the very last stretch before she tried her game.

Some minutes passed before his mixed anger and panic settled down and allowed him to think.

Thirty hours! Time to do quite a lot. And even if he did not succeed in getting back into the dome in twenty hours or so, there would still be the last, desperate resort of shooting himself off to Callisto in one of the cylinder crates.

Even if Lellie were to spill over later about the Whint business, what of it? He was sure enough that she did not know *how* it had been done. It would only be the word of a Mart against his own. Very likely they'd put her down as space-crazed.

All the same, some of the mud might stick. It would be better to settle with her here and now. Besides, the cylinder idea was risky, to be considered only in the last extremity.

Duncan jettied himself over to the smaller dome. In there, he threw out the switches on the lines which brought power down from the main batteries charged by the Sun motor, then sat down to wait. The insulated dome would take some time to lose all its heat, but not very long for a drop in the temperature to become perceptible, and visible on the thermometers, once the heat was off. The small-capacity low-voltage batteries that were in the place wouldn't be much good to

her, even if she did think of lining them up.

He waited an hour, while the faraway Sun set, and the bright arc of Callisto began to show over the horizon. Then he went back to the dome's window to observe results. He arrived just in time to see Lellie fastening herself into her spacesuit by the light of a couple of emergency lamps.

He swore. A simple freezing out process wasn't going to work, then. Not only would the heated suit protect her, but her air supply would last longer than his—and there were plenty of spare bottles in there, even if the free air in the dome froze solid.

He waited until she had put on the helmet, and then switched on the radio in his own. He saw her pause at the sound of his voice, but she deliberately switched off her receiver. He did not; he kept his open, to be ready for the moment when she would come to her senses.

DUNCAN returned to the apron and reconsidered. It had been his intention to force his way into the dome without damaging it, if he could. But if she wasn't to be frozen out, that looked difficult. She had the advantage in air, and though it was true that in her spacesuit she could neither eat nor drink, the same, unfortunately, was true for

him. The only way seemed to be to tackle the dome itself.

Reluctantly, he went back to the small dome again and connected up the electrical cutter. Its cable looped behind him as he jetted across to the main dome once more. Beside the curving metal wall, he paused to think out the job—and the consequences.

Once he was through the outer shell there would be a space, then the insulating material—that was all right; it would melt away like butter, and without oxygen it could not catch fire. The more awkward part was going to come with the inner metal skin. It would be wisest to start with a few small cuts to let the air-pressure down—and stand clear of it. If it were all to come out with a whoosh, he would stand a good chance, in his weightless state, of being blown a considerable distance by it.

And what would she do? She'd very likely try covering up the holes as he made them—a bit awkward if she had the sense to use asbestos packing. It'll have to be the whoosh then.

Both shells could be welded up again before he re-aerated the place from cylinders. The small loss of insulating material wouldn't matter. Okay, better get down to it, then . . .

He made his connections and

contrived to anchor himself enough to give some purchase. He brought the cutter up and pressed the trigger-switch. He pressed again and then swore, remembering that he had shut off the power.

Pulling himself back along the cable, he pushed the switches in again. Light from the dome's windows suddenly illuminated the rocks. He wondered if the restoration of power would let Lellie know what he was doing. Hell with it. She'd know soon enough.

He settled himself down beside the dome once more. This time the cutter worked. It took only a few minutes to slice out a rough two-foot circle. He pulled the piece out of the way and inspected the opening. Then, as he leveled the cutter again, there came a click in his receiver.

"Better not try to break in," Lellie said. "I'm ready for that."

He hesitated, checking himself with his finger on the switch, wondering what counter-move she could have thought up. The threat in her voice made him uneasy. He decided to go around to the window and see what her game was, if she had one.

She was standing by the table, still dressed in her spacesuit, fiddling with some apparatus she had set up there. For a moment or two he did not grasp the purpose of it.

There was a plastic food bag, half-inflated, and attached in some way to the table top. She was adjusting a metal plate over it to a small clearance. There was a wire taped to the upper side of the bag. Duncan's eye ran back along the wire to a battery, a coil, and on to a detonator attached to a bundle of half a dozen blasting-sticks.

He was uncomfortably enlightened. If the air-pressure in the room fell, the bag would expand; the wire would make contact with the plate; up would go the dome . . .

LELLIE finished her adjustment and connected the second wire to the battery. She turned to look at him through the window. Duncan found it was infuriatingly difficult to believe that, behind that silly-surprise frozen on her face, she could be aware of what she was doing.

He tried to speak to her, but she had switched off and made no attempt to switch on again. She simply stood looking steadily back at him as he blustered and raged. After some minutes, she moved across to a chair, fastened the spring-cover across herself, and sat waiting.

"All right, then," Duncan shouted inside his helmet. "But you'll go up with it, damn you!" Which was, of course, nonsense,

since he had no intention whatever of destroying either the dome or himself.

He had never learned to tell what went on behind that absurd face. She might be coldly determined, or she might not. If it had been a matter of a switch that she had to press to destroy the place, he might have risked her nerve failing her. But this way, it would be he who operated the switch, just as soon as he made a hole to let the air out.

Once more he retreated to anchor himself on the apron. There must be some way of getting into the dome without letting the pressure down . . .

No, there was no way that he could think of. It would have to be the cylinder crate to Callisto.

He looked up at Callisto, hanging huge in the sky now, with Jupiter smaller, but brighter, beyond. It wasn't so much the flight, it was the landing there. Perhaps if he were to cram it with all the padding he could find . . . Later on, he could get the Callisto crew to ferry him back, and they'd find some way to get into the dome, and Lellie would be a mighty sorry girl—*mighty* sorry.

Across the clearing there were three cylinders lined up, charged and ready for use. He didn't mind admitting he was scared of that landing; but, scared or not, if she wouldn't even turn on her radio

to listen to him, that would be his only chance.

He made up his mind and stepped off the metal apron. A touch on the jets sent him floating across the clearing toward the cylinders. Practice made it easy to maneuver the nearest one onto the ramp. Another glance at Callisto's inclination helped to reassure him; at least he would reach it all right. If their beacon was not switched on to bring him in, he ought to be able to call them on the communication radio in his suit when he got closer.

He fetched more padding from the other cylinders, and packed the stuff in. While he paused to figure out a way of triggering the thing off with himself inside, he realized he was beginning to feel cold. As he turned the knob up a notch, he glanced down at the meter on his chest. The cold became a chill of horror.

Lellie hadn't tampered with the flasks of air—she'd known, damn her, that he would check them. Instead, she must have shorted the battery or the heating circuit in the suit. The voltage was down so low that the needle barely kicked. Another few minutes and he might as well be naked in the cold of space, for the suit, without its heating unit, would be no protection whatever.

After its first stab, the fear abruptly left him, giving way to

fury. She'd tricked him out of his last chance, but, by God, he could make sure she didn't get away with it! One small hole in the dome and he wouldn't die alone...

The cold was lapping at him icily through the suit. He pressed the jet control and sent himself scudding back toward the dome.

His feet and fingers were going first. Only by an immense effort was he able to operate the jet which stopped him by the dome.

He struggled to press the control that would jet him down to it, but his fingers would no longer move. He wept and panted with the attempt to make them work.

There was an agonizing, searing pain in his chest. He gasped—and the unheated air rushed into his lungs and froze them.

IN the dome's living room, Lellie stood waiting. She had seen the spacesuited figure come sweeping across the clearing at an abnormal speed. She understood what it meant. Her explosive device was already disconnected; now she stood alert, with a thick rubber mat in her hand, ready to clap it over any hole that might appear. She waited one minute, two minutes . . .

When five minutes had passed, she went to the window. By putting her face close to the pane and looking sideways, she was able to see the whole of one

armorclad leg and part of another. They hung there, horizontally, a few feet off the ground. She watched them for several minutes.

She left the window, pushing the mat out of her hand so that it floated away across the room. For a moment or two she stood thinking. Then she went to the bookshelves and pulled out the last volume of the encyclopedia. She read long enough to satisfy herself on the exact status and claims which were connoted by the word "widow."

She found a pad of paper and a pencil. She hesitated, trying to remember the method she had been taught. Then she started to write down figures, and became absorbed in them.

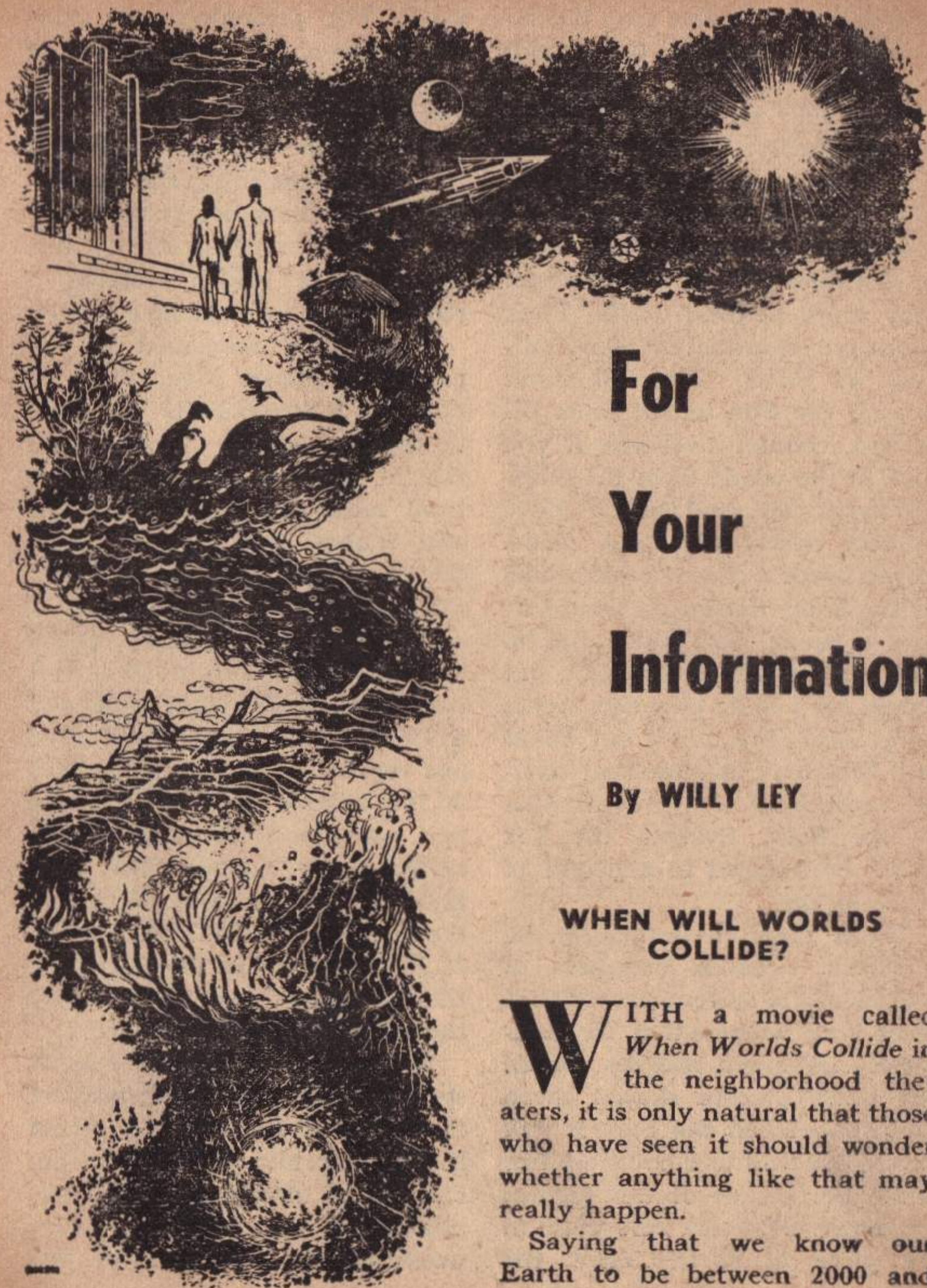
At last she lifted her head and contemplated the result: \$5,000 a year for five years, at 6% compound interest.

But then she paused again. Very likely, a face that was not set forever in a look of surprised innocence would have frowned, because, naturally, there was a debit of \$2,360.

Being incapable of both, Lellie neither smiled nor frowned. She gravely entered the \$2,360 as a capital investment and the balance as profit.

It was quite a fortune for a dumb Mart.

—JOHN WYNDHAM



For Your Information

By WILLY LEY

WHEN WILL WORLDS COLLIDE?

WITH a movie called *When Worlds Collide* in the neighborhood theaters, it is only natural that those who have seen it should wonder whether anything like that may really happen.

Saying that we know our Earth to be between 2000 and

3000 million years old and that it is still in one piece does not invalidate the question: Can worlds collide?

Well, let's attack the problem systematically. First, a few fundamental astronomical facts. Nine planets, of assorted sizes, swing around the Sun. The closer to the Sun they are, the faster they move in their orbits. Their orbits are separated by many millions of miles. They all move around the Sun in the same direction, counter-clockwise if you look at the whole from the celestial north pole. And they all move in very nearly the same plane. If you made a precise scale model of the Solar System, it would fit into a round box which has to have a diameter of four feet, but would need to be only five inches deep. And if you left out Pluto and Mercury, the two that deviate most from the general plane of the Solar System, the box could be reduced to a height of three inches.

Under these circumstances, no collisions between members of our own solar system are possible. Even if we imagine that, for completely unknown reasons, one of the outer planets slowed down and approached the Sun, it still would not lead to a collision. For while the planes of the various planetary orbits are very close to the plane of Earth's orbit, the

ecliptic, they are not precisely the same. The presumed new orbit of a slowed-down outer planet might cross the orbit of Earth, but because of the fact that the planes of the various orbits fail to coincide perfectly, the two orbits would cross *not* in the manner of two crossing streets, but more like a bridge crossing a street or a street crossing a tunnel.

Then what happened to the presumed Planet Five, which is now the Asteroid Belt? We can't be sure, but we are pretty certain that it was not a collision. The total mass of all the asteroids still makes only a very small planet, somewhere between our moon (2160 miles in diameter) and the planet Mercury (3100 miles in diameter) in size. And that very small planet happened to be nearest the largest planet of our system, Jupiter (diameter 86,700 miles). About 150 years ago, when only the four largest bodies of the Asteroid Belt were known, the discoverer of two of them, Heinrich W. M. Olbers, M.D., suggested for the first time that they may have originated by the explosion of one planet.

If that was really the case, it should be possible to reconstruct the orbit of the original planet from the orbits of the four big chunks of *débris*. And in the pursuit of that calculation one would also be able to fix the ap-

proximate date of the event. The calculation was not made then, partly because it would have been a difficult and exceedingly tedious job, partly because astronomers, both professionals and amateurs, kept adding and adding to the list of minor planets. But much later, only a few decades ago, Prof. K. Hirayama did go to work on the problem of calculating the original orbit of the presumed disrupted planet from the orbits of the presumed fragments.

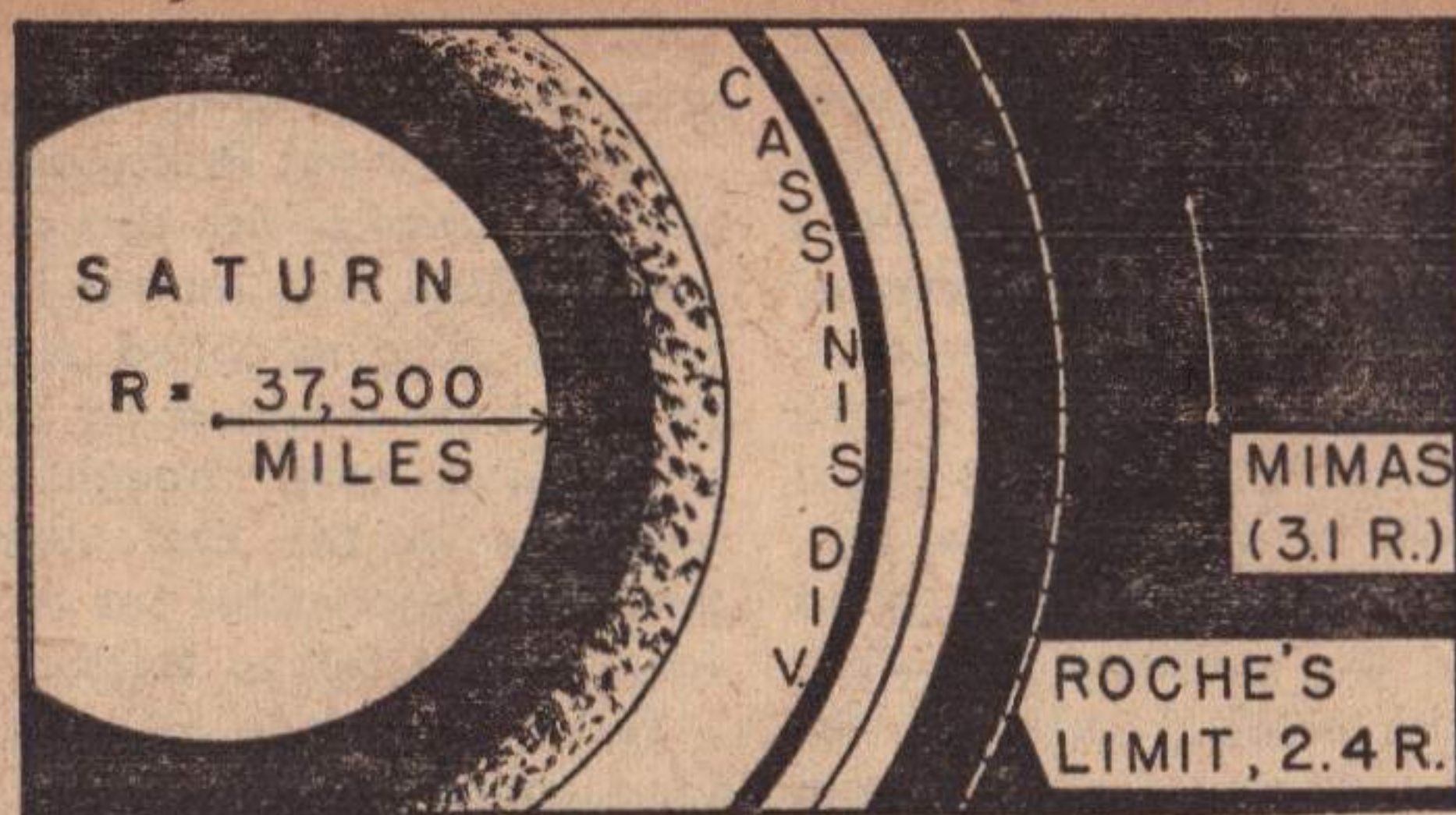
Interestingly enough, Prof. Hirayama did not find a common origin. Instead, he found five different origins, one each for five so-called "families" of planetoids. There was the one named the Flora Family, after its brightest member. Flora (#8) is the member of a family of 57. Maria (#170) is a member of a family of 13; Koronis (#158) is a member of a family of 15; Eos (#221) is one of a family of 23; and, finally, Themis (#24) is one of a family of 25. For each of these families, a common origin could be calculated, but it was impossible to trace the story farther back, all of which seems to indicate that there never was an original Planet Five. Presumably, Jupiter's gravitational pull prevented it from forming and, instead of one planet, more than five tiny planets formed in that

area, which later, one by one, were torn apart again by Jupiter.

Whether or not Professor Hirayama is correct with this conclusion matters little for our present purpose. The so-called Asteroid Belt did not originate by way of a collision—even though minor collisions in the Belt now are probably responsible for the meteorites that fall to Earth.

But why look to other planets for a collision? Aren't there some theories around which state that the Moon is slowly approaching Earth? And even though its diameter is only about one-quarter of the diameter of Earth, that should make a sufficiently destructive impact.

However, there are a few natural laws in the way which are usually referred to as "Roche's Limit," named after the French astronomer E. Roche of Montpellier, who made a certain calculation in 1850. The calculation was this: Suppose that a satellite slowly approached its planet in an orbit like a tightly wound spiral. (It couldn't have any other shape.) Then this satellite would raise stronger and stronger tides on the planet. But the planet would also raise tides in its satellite's crust. And since the planet is bigger and its gravitation stronger, it would win. Under the stress of the tidal forces exerted by the planet, the satellite would



Saturn and its rings seen from a point directly above Saturn's northern pole. The main division of the rings is known as Cassini's Division, the fine division in the outer ring as Encke's Division, both named after their discoverers. Mimas is Saturn's innermost satellite, well outside Roche's Limit.

break up, layer after layer would be peeled off and the débris would form a ring around the planet. The pieces forming the ring might still crash, but they would be just pieces, strong falls of meteoric matter, no shattering impact.

The distance at which this would take place would depend on several factors—the relative densities of planet and satellite and, to some extent, the tensile strength of the material forming the satellite. Roche calculated that a satellite of the same density as its planet and being liquid (in a loose sense of the word) could not exist within 2.4 radii from the planet's center.

Saturn's rings (see diagram) are well inside Roche's Limit. Again it is an open question whether the rings are the remains of a moon which was broken up by Saturn's tidal forces, or whether they are material which could not condense into a moon, because they were situated where no moon is possible.

Almost a century after Roche, Prof. H. Jeffreys undertook the job of finding out how small a rocky satellite would have to be to escape the forces which constitute Roche's Limit. In 1947 he announced that a satellite of solid rock would have to be larger than about 130 miles in diameter to be disrupted by the tidal forces

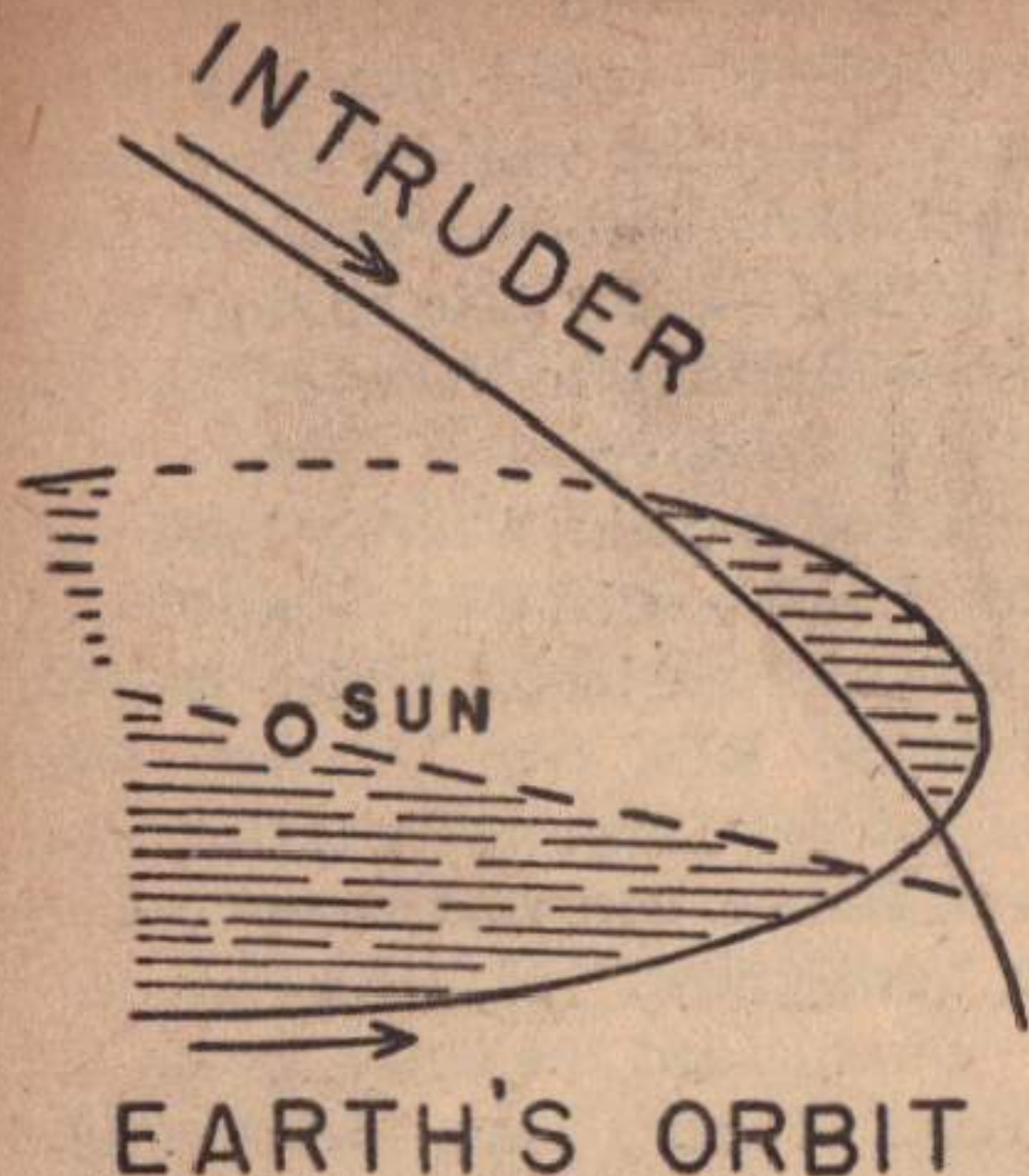


Diagram of the orbit of a hypothetical "Intruder" coming into the Solar System on an orbit almost vertical to that of the ecliptic. Some comets do have similar orbits, but none is known to have hit Earth. If one did, it would be a purely local catastrophe.

which Earth could exert upon it. But even a 100-mile satellite—if there were one—would not hit Earth as a whole. Since it would enter the atmosphere pretty nearly tangentially ("horizontal"), it would be shattered by unequal heating.

How, then, could another planet—say, the planet of another sun—hit Earth? Only if it approached in such a manner that

there is no time for an effective interplay of tidal forces. The diagram shows a typical comet orbit, strongly inclined to the ecliptic, coming from "above." If such an orbit crossed that of Earth and if both Earth and intruder happen to arrive at the same spot in the same instant, there would be a collision.

But now let's see: the nearest other sun is, in round figures, 24 million million miles away. The average velocity of a sun moving through space is much less than one per cent of the velocity of light, usually somewhere between 0.01 and 0.025 of one per cent of that velocity.

Let's assume that the nearest star moved with a velocity of one per cent of that of light, which it doesn't, and that it were aimed for a collision point with our sun, which it isn't.

It would need four centuries to strike.

If one has to worry about something, there are more urgent problems than the possibility of cosmic collision.

THE SIX-LEGGED GHOST

I DON'T have any particular reason for talking about the insect *Myrmecophana*, but I don't see why I should need one. I am simply amused by what happened and the gist of the story is

that there is no such insect.

It began quite harmlessly with a small box which the mailman handed to Herr Professor Dr. Brunner von Wattenwyl one day in 1883. Dr. von Wattenwyl was an entomologist and he didn't really have to read the letter that came with the small box. There were some insects in it, sent for proper classification. The insects were ants which had been collected in East Africa. They were new to the man who had collected them. Were they also new to science?

When Brunner von Wattenwyl looked at them carefully, he saw that they were indeed new to science. And they were not even ants. They were related to the locusts, but masqueraded as ants.

The thick body had a green triangle on each side, quite conspicuous against the background of a white sheet of paper. But if placed on a leaf, these two green triangles imitated the narrow "waistline" of an ant. Likewise, the legs were striped black and green lengthwise, so that only the black center stripe showed clearly. That stripe had the width of an ant's leg. Even the antennae, longer than those of an ant, were camouflaged. At the precise point where the feelers of an ant would come to an end, there was a white section which seemed to cut it off.

Brunner von Wattenwyl suspected—he could not know for sure, since he worked with dried specimens, but his suspicion was justified — that this camouflaged grasshopper also behaved like an ant when alive.

What remained to be done was to invent a scientific name. Well, here was an insect which did its best to look like an ant. One might say that it "ghosted" an ant. Hence, von Wattenwyl called it "ant-ghost," *Myrmecophana*.

That ended the story for an interval of more than two decades, when a traveling zoologist, one Dr. Vosseler (later director of the Zoological Garden of Hamburg), happened across *Myrmecophana* in East Africa.

It mingled with true ants, cavorting like them.

Vosseler, unaware of the earlier description, was struck by some minor differences, collected some of the "new species of ant" and took them with him, alive.

Kept in wire cages for later classification, the pseudo-ants seemed to be growing a little, though insects, once they have reached the adult form, rarely grow larger. And then, one day, they began to change. The pseudo-ants, as they changed shape, also changed their behavior. No nervous running any more, stately calmness instead. They had become leaf insects,

now imitating the leaves of plants, sitting still if possible and moving slowly when moving became necessary.

And with that observation *Myrmecophana* became a "ghost" of another kind. For the finished leaf insect was already known to science under the label *Eury-corypha*. The pseudo-ant was recognized as the larval form of the pseudo-leaf. And its separate name was officially deleted.

MOON OF VENUS

READING over my first column about the moons of the Solar System, I find myself guilty of an omission: I didn't say anything about the satellite of Venus.

But Venus, you'll object, does not have a moon. I know that. However, the moon which Venus does not have has a story and I think it worth telling.

It began during the year 1645. Some thirty-five years earlier, Galileo Galilei had discovered the four large moons of Jupiter, and astronomers began to look for moons of other planets. In the year mentioned a Neapolitan, Francesco Fontana, announced that Venus had a fairly small, bright moon. Telescopes were still rare and weak, so other observers were not surprised if they failed to see it.

Some time later, Fontana's dis-

covery was corroborated by as important a man as Jean Dominique Cassini. Cassini had discovered one of Saturn's moons (Japetus) in 1671 and had announced still another moon of Saturn (Rhea) in 1672, the same year in which he reported seeing the satellite of Venus. (Later Cassini found two more of Saturn's moons, Tethys and Dione.) Cassini said that he had seen something that might have been Venus's moon as early as 1666, but he had not been sure at the time.

After that the Venus satellite was "lost" again, but its reality could not be doubted—Cassini himself had seen it! Roughly a century after the original discovery by Fontana, several other observers went on record as witnesses for the existence of a moon of Venus. Short in England saw it in 1740; Mayer in Greifswald in 1759; Montaigne in Limoges, France and Rödkier in Copenhagen both observed it for several days in 1761. The angular distance from the planet, they reported, was between 20 and 25 minutes of arc. Three years later, in 1764, Horrebow in Copenhagen and Montbarron in Auxerre verified the observations of their respective compatriots, Rödkier and Montaigne.

There was just one uncooperative fact in the way. Since Venus

is closer to the Sun than we are, it happens on rare occasions that the planet is in line of sight between us and the Sun, a performance technically known as a "transit." If Venus had a satellite, it should show up beautifully as a black spot against the blinding background of the Sun's disk. Venus transits are rare, but just at the period under discussion there were two of them, in 1761 and in 1769. They were observed carefully for many different reasons, but nobody detected even a trace of a Venus satellite.

The Viennese astronomer, Father Maximilian Hell, S. J., after whom Hell Crater on the Moon is named, drew the conclusion that Montaigne and Montbarron, Rödkier and Horrebow, Mayer and Short—and, yes, even the great Cassini — must have been mistaken. Venus is a very bright planet, bright enough to cause a reflection on the cornea of the eye of the observer. This reflection will be reflected, in turn, on the eyepiece of the telescope and then be "seen" by the observer. Of course, it will not coincide with the image of the planet, but produce a tiny bright spot nearby. Thus Father Hell in 1766.

But the satellite of Venus had too much momentum by then. Johann Heinrich Lambert—writing in French like a good German

of his time—published an *Essai d'une théorie du satellite de Vénus* in Berlin in 1773 in which he tried to calculate the orbit of that moon. Frederick the Great of Prussia read it and decided that this was a fine opportunity to honor the philosopher and mathematician Jean Le Rond d'Alembert by naming the moon of Venus *d'Alembert*. If d'Alembert had not refused the honor—we don't know why—there would have been a royal decree to that effect.

By 1800, all astronomers were agreed that Venus did not have a moon. But they also agreed that Father Hell's ingenious explanation was not good enough. Though something like that might fool a beginner, the majority of those who had seen the satellite of Venus had been competent men. The puzzle was not solved until 1887 when a Belgian astronomer, P. Stroobant, reviewed the whole case. Stroobant asked himself the obvious question: "Just where was Venus located in the sky when the various observers thought they saw a satellite?"

Since precise records existed, this question was easy to answer. Stroobant simply looked up the positions of Venus for those days and entered them on a good star map. And he found that in every case there had been a relatively

bright fixed star in the immediate neighborhood of Venus. On one occasion *mu Tauri* had been less than half a degree of arc from Venus. On other occasions it was 65 *Orionis* or 71 *Orionis*, just

bright enough to be seen by the naked eye.

That was the end of the search for the moon of Venus.

—WILLY LEY

ANY QUESTIONS?

How many Jovian satellites would be visible to an observer on Jupiter, assuming that there are no clouds?

Gary B. Dunkel
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He could see the four large satellites — Io, Europa, Ganymede and Callisto — with the naked eye. With a small portable telescope, he could also see Moon No. V, which is closest to Jupiter. All the others would need rather powerful telescopes because they are very small and comparatively slow-moving.

Isaac Asimov and other science fiction writers have used the word "parsec" on several occasions. What is a parsec and how is its value derived?

Is there any phenomenon known which would aid instantaneous or speed-of-light transmission of matter?

David Shafer
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Parsec means a distance which produces a PARallax of one SECond of arc, an apparent yearly shift of 1/3600th of one degree of arc. Expressed arithmetically, one parsec is 3.259 light-years.

No, we don't know of any phenomenon that would make transmission of matter possible, assuming you mean disassembling molecules in one place and reassembling them elsewhere. The speed is not very important at this point; achieving it at all is the problem. It seems somewhat unlikely at present. But so did atomic power in 1940.

I do not question the value of a space station as an observation point and for research, but why does every writer on the subject consider it invincible from a military standpoint? Why wouldn't it be just as easy for those on the ground to intercept missiles fired by the space station?

Joshua J. Ward
No Address

Suppose the space station belongs to the USA, involved in a shooting war with the Empire of Africa and Madagascar. The missiles from the space station would then be released while the station is over the Pacific, close to 180 degrees around the globe. The ground radars would not be able to pick up the missiles until too late, since they would come in over the horizon at a shallow angle. Also, they would not be able to tell whether the target is Cape Town, Tananarive, Libreville or Nairobi. But the people on the station would know what the target is going to be for any missile that rises from the atmosphere. Hence the station would have a much easier job of interception. It might not be completely invincible, but it certainly would have the advantage.

"Escape velocity" is my pet peeve. If we had a good enough fuel, we could creep out of this world at one mile per hour.

*Pfc. Robert A. Vignerot
Fort Lawton, Washington*

Of course, if we had enough fuel, we could move out of the gravitational field of Earth as gradually as we please. The fig-

ure of seven miles per second for the escape velocity is merely one way of expressing the amount of work to be done. But it is another question of whether such "creeping out" would be practical.

Consider: in *Destination Moon* they assumed an average acceleration of six g which made the ship attain escape velocity three minutes and 60 seconds after takeoff, at which time the ship would be 800 miles above the surface. To climb to 800 miles at the rate of 1000 miles per hour would take 8/10ths of an hour or 48 minutes. During that climb to 800 miles altitude, Earth pulls the spaceship back at an average rate of about 30 feet per second for every second elapsed. This loss of speed must be made up by expenditure of fuel.

In the first case, the climb to 800 miles was accomplished in 230 seconds. In the second case, the climb to the same height took 2880 seconds. After figuring out how much effect Earth's gravity would have in either case, you'll probably stop wondering why rocket men insist in attaining escape velocity as quickly as possible.

Shipshape Home

By RICHARD MATHESON

THAT janitor gives me the creeps," Ruth said when she came in that afternoon.

I looked up from the typewriter as she put the bags on the table and faced me. I was killing a second draft of a story.

"The creeps," I repeated.

"Yes, he does," she said. "That way he has of slinking around, like Peter Lorre."

"Peter Lorre," I said, still concentrating on my plotting.

"Babe," she implored, "I'm serious. The man is a creep."

I snapped out of the creative fog with a blink.



*When you start seeing things,
remember this: the things you
are seeing may be seeing you!*

Illustrated by EMSH

"Hon, what can the poor guy do about his face?" I said. "Heredit. Give him a break."

She plopped down in a chair by the table and started to take out groceries, stacking cans on the table.

"Listen," she said.

I could smell it coming, that dead serious tone of hers which she isn't even aware of any more, but which comes every time she's about to make one of her "revelations" to me.

"Yes, dear," I said. I leaned one elbow on the typewriter and gazed at her patiently.

"You get that expression off your face," she said. "You always look at me as if I were an idiot child."

I smiled. Wanly.

"You'll be sorry," she said, "some night when that man creeps in with an axe and dismembers us."

"He's just a poor guy earning a living. He mops the halls, he stokes the furnaces, he—"

"We have oil heat," she said.

"If we had furnaces, he would stoke them. Let us have charity. He labors like ourselves. I write stories; he mops floors. Who can say which is the greater contribution to civilization?"

"Okay," she said with a surrendering gesture. "Okay, if you don't want to face facts."

"Which are?" I prodded. I de-

cided it was best to get it out of her before it burned a hole in her mind.

Her eyes narrowed. "You listen to me. That man has some reason for being here. He's no janitor. I wouldn't be surprised if . . ."

"If this apartment house were just a front for a gambling establishment. A hideout for public enemies numbered one through fifteen. An abortion mill. A counterfeiter's lair. A murderer's rendezvous."

She was already in the kitchen thumping cans and boxes into the cupboard.

"Okay," she said, "okay," in that patient if-you-get-murdered-don't-come-to-me-for-sympathy voice. "Don't say I didn't try. If I'm married to a wall, I can't help it."

I came in and slid arms around her waist. I kissed her neck.

"Stop that," she said, turning around. "You can't change the subject this easily. The janitor is . . ."

"You're serious," I interrupted, startled.

Her face darkened. "I am. The man looks at me in a funny way."

"What way?" I asked.

She searched. "In . . . in anticipation."

I chuckled. "Can't blame him. Who wouldn't?"

"I don't mean that way."

"Remember the time you

thought the milkman was a knife killer for the Mafia?"

"I don't care."

I kissed her neck again. "Let's eat."

She groaned. "Why do I try to tell you anything?"

"Because you love me."

She closed her eyes. "I give up," she said quietly, with the patience of a saint under fire.

"Come on, hon. We have enough troubles."

She shrugged. "Oh, all right."

"Good," I said. "When are Phil and Marge coming?"

"Six," she said. "I got pork."

"Roast?"

"Mmmm."

"I'll buy that."

"You already did."

"I must get down to the typewriter again so we can afford it."

While I squeezed out another page, I heard her muttering to herself in the kitchen. All that came through was a grim: "Murdered in our beds or something."

"NO, it's fluky," Ruth analyzed as we sat having dinner that night.

I grinned at Phil and he grinned back.

"I think so, too," Marge agreed. "Whoever heard of charging only sixty-five a month for a five-room apartment, furnished? Stove, refrigerator, washer—it's fantastic!"

"Girls," I said, "let's not quib-

ble. Let's take advantage."

"Oh!" Ruth tossed her pretty blonde head. "If a man said, 'Here's a million dollars for you, old man,' you'd probably take it."

"I most definitely would take it," I admitted. "I would then run like hell."

"You're naive," she said. "You think everybody is Santa Claus."

"It is a little funny," Phil said. "Think about it, Rick."

I thought about it. A five-room apartment, brand-new, furnished in even better than good taste right down to a couple of sets of expensive dishes . . .

I pursed my lips. A guy can get lost writing about the bars on Mars. Maybe it was true. I could see their point. Of course, I wouldn't show it, though. And spoil Ruth's and my little game of war? Never.

"I think they charge too much," I said.

"Oh, Lord!" Ruth was taking it straight, as she usually did. "Too much? Five rooms yet! Furniture, dishes, linens, a television set! What do you want, a swimming pool?"

"A small one would be good enough."

She looked at Marge and Phil. "Let us discuss this thing quietly. Let us pretend that the fourth voice we hear is nothing but the wind in the eaves."

"I am the wind in the eaves," I said.

"Listen," Ruth restated her forebodings, "what if the place were a fluke? I mean, what if they just want people here for a cover-up? That would explain the rent. You remember the rush on this place when they started renting?"

I remember as well as Phil and Ruth and Marge. The only reason we'd got apartments was we all happened to be walking past the place when the janitor put out the renting sign. The four of us had gone right in. I remember our amazement, our delight, at the rental. Why, we'd been paying more than double for half the size and ratty furniture, besides.

Phil and Marge and Ruth and I were the first tenants. The next day was like the Alamo under attack. It's a little hard to get an apartment these days.

"I say there's something funny about it," Ruth finished. "And did you ever notice that janitor?"

"He's a creep," I contributed.

"He is," Marge laughed. "My God, he's something out of a B picture. Those eyes! He looks like Peter Lorre."

"See!" Ruth was triumphant.

"Kids," I said, raising a hand of weary conciliation, "if there's something foul going on behind our backs, let's allow it to go on. We aren't being asked to help

out or suffer by it. We are living in a nice spot for a nice rent. What are we going to do—look into it and maybe spoil it?"

"What if there are designs on us?" Ruth demanded.

"What designs, hon?" I asked.

"I don't know," she said. "But I sense something."

"Remember the time you sensed the bathroom was haunted? It was a mouse. I told you ghosts don't haunt bathrooms. Well, anybody who wants to make a career out of being sinister doesn't go in for janitoring. Limits his scope too much."

She started clearing off the dishes. "Are you married to a blind man too?" she asked Marge.

"Men are all blind," Marge said, accompanying my poor man's seer into the kitchen. "We must face it and be brave."

Phil and I lit cigarettes.

"No kidding now," I said, so the girls couldn't hear, "do you think there's anything wrong?"

He shrugged. "I don't know, Rick," he admitted. "I will say this—it's pretty strange to rent a furnished place for so little."

Yeah, I thought, awake at last. Strange was the word.

I stopped for a chat with our strolling cop the next morning. Johnson walks around the neighborhood, afternoons. There are vicious gangs in the vicinity,

he told me, traffic is heavy and, besides, the kids need watching after three in the afternoon.

He's a good Joe, lots of fun. I chat with him every day when I go out for anything.

"My wife suspects foul doings in our apartment house," I told him.

"This is my suspicion," Johnson said, dead sober. "It is my unwilling conclusion that, within those walls, six-year-olds are being forced to weave baskets by candle light."

"Under the whip hand of a gaunt old hag," I added.

He nodded sadly. Then he looked around, plotter-like.

"You won't tell anyone will you?" he begged. "I want to crack the case all by myself."

I patted his shoulder. "Johnson," I said, "your secret is locked behind these iron lips."

"I am grateful," he said.

We laughed.

"How's the wife?" he asked.

"Suspicious," I said. "Investigating. Curious."

"Everything normal, then."

"Right. I guess I'll really start worrying when she stops acting like this."

"What is it she really suspects?"

I grinned. "She thinks the rent is too cheap. Everybody around here, she claims, pays a lot more for a lot less."

"Is that right?" Johnson said.

"Yeah," I said, punching his arm. "Don't you tell anybody. I don't want to lose a good deal."

Then I went to the store.

RUTH said, "I knew it. I *knew* it."

She gazed intently at me over a pan of soggy clothes.

"You knew what, hon?" I wanted to know, putting down the package of second sheets I'd gone out to buy.

"This place is a fluke." She raised her hand warningly. "Don't you say a word. You just listen to me."

I sat down. "Yes, dear. Not a word."

"I found engines in the basement," she said, and then waited for a reaction.

"What kind of engines, dear? Fire engines?"

Her lips tightened. "Come on, now," she said, getting a little burned up. "I saw the things."

She meant it.

"I've been down there too, hon," I said. "How come I never saw any engines?"

She looked around. I didn't like the way she did it. She looked as if she really thought someone might be lurking at the window, listening.

"This is *under* the basement," she said.

I looked very dubious.

She stood up. "Damn it! You come on and I'll show you!"

She held my hand as we went through the hall and into the elevator. She stood grimly by me as we descended, my hand tight in her grip.

"When did you see them?" I asked, trying to make conversation.

"When I was washing in the laundry down there," she said. "In the hallway, I mean, when I was bringing the clothes back. I was coming to the elevator and I saw a doorway. It was a little open."

"Did you go in?" I asked.

She looked irritably at me.

"You went in," I said.

"I went down the steps there and it was light and . . ."

"And you saw engines."

"That's right."

"Big ones?"

The elevator stopped and the doors slid open. We went out.

"I'll show you how big," she said. It was a blank wall. "It's here."

I looked at her. I tapped the wall. "Honey," I said.

"Don't you dare say it!" she snapped. "Have you ever heard of doors in a wall?"

"Was this door in the wall?"

"The wall probably slides over it," she said, starting to tap. It sounded solid to me. "Damn it! I saw it, I tell you. I can just hear

what you're going to say."

I didn't say it. I just stood there watching her.

"Lose something?"

The janitor's voice behind us was sort of like Lorre's, low and insinuating.

Ruth gasped, caught way off guard. I jumped a bit myself.

"My wife thinks there's a—"

"I was showing him the right way to hang a picture," Ruth interrupted hastily. "That's the way, babe." She turned toward me. "You put the nail in at an angle, not straight in. Now do you understand?"

The janitor smiled.

"See you," I said awkwardly. I felt his eyes on us as we walked back to the elevator.

When the doors shut, Ruth turned quickly.

"Good night!" she stormed. "What are you tryin to do, get him on us?"

"What . . . ?"

"Never mind," she said. "There are engines down there. Huge engines. I saw them. And he knows about them."

"Baby," I said, "why don't . . ."

"Look at me," she said quickly. I looked.

"Do you think I'm crazy?" she asked. "Come on, now. Never mind the hesitation."

I sighed. "I think you're imaginative."

She looked disgusted. "You're

as bad as . . ."

"You and Galileo," I added. "It's tough being ahead of your generation. Happens, though, to every genius."

"I'll show you those things," she said. "We're going down there again tonight, when that janitor is asleep. If he's ever asleep."

I got worried. "Honey, cut it out. You'll get me started, too."

"Good," she said. "Good. I thought it would take a hurricane."

I sat staring at my typewriter all afternoon, nothing coming out. But concern.

I didn't get it. Was she actually serious? All right, I thought, I'll take it seriously. She saw a door that was left open. Accidentally. That was obvious. If there really were huge engines under the apartment house, as she said, then the people who built them damn well wouldn't want anyone to know about them.

East 7th Street. An apartment house. And huge engines underneath it.

Now where's the sense in that?

SHE was shaking. Her face was white. She stared at me like a kid who's read her first horror story.

"The janitor has three eyes!"

"Honey," I said. I put my arms around her. She was really scared. I felt sort of scared myself. And

not about the janitor having an extra eye, either.

I didn't say anything at first. What can you say when your wife comes up with something like that?

She shook a long time. Then she spoke in a quiet voice, a timid voice: "You don't believe me."

I swallowed. "Baby," I said helplessly.

"We're going down tonight," she stated. "This is really important now. It's nothing to joke about."

"I don't think we should . . ." I started to say.

"I'm going down there." She sounded edgy now, a little hysterical. "I tell you there are engines down there. Goddam it, there are *engines*!"

She started crying now. I patted her head, rested it against my shoulder.

"All right, baby," I said. "All right."

She tried to tell me through her tears, but it wouldn't work. Later, when she'd calmed down, I listened. I didn't want to get her upset. I figured the safest way was just to listen.

"I was walking through the hall downstairs," she said. "I thought maybe there was some afternoon mail. You know, once in a while our mailman will . . ."

"I know, hon," I soothed. "He comes around with another mail

when the deliveries are heavy."

She stopped. "Never mind that. What matters is that I walked past the janitor."

"And?" I asked, afraid of what was coming.

"He smiled," she said. "You know the way he does. Sweet and murderous."

I didn't argue the point. I still didn't think the janitor was anything but a harmless guy who had the misfortune to be born with a face that was strictly from Charles Addams.

"So?" I said. "Then what?"

"I walked past him. I felt myself shivering, because he looked at me as if he knew something about me I didn't even know. I don't care what you say, that's the feeling I got. And then . . ."

She shuddered. I took her hand. "Then?"

"I felt him looking at me."

I'd felt that, too, when he had found us in the basement. I knew what she meant. You actually felt the guy looking at you.

"All right," I said, "I'll buy that."

"You won't buy this," she went on grimly. "When I turned around to look, he was walking away from me."

"Oh, you both turned at the same time?"

She slapped the table. "I turned. He didn't."

"But you just said—"

"He was looking at me. He was walking away and his head was to the front and he was looking at me."

I sat there numbly. I patted her hand without even knowing I was doing it.

"How, hon?" I heard myself asking her.

"There was an eye in the back of his head."

"Hon!" I said.

She closed her eyes. She clasped her hands after drawing away the one I was holding. She pressed her lips together. I saw a tear wriggle out from under her left eyelid and roll down her cheek. She was white.

"I saw it," she said quietly. "So help me, I saw that eye."

I don't know why I went on with it. Self-torture, I guess. I really wanted to forget the whole thing, pretend it never even happened, but I couldn't leave it at that.

"Why haven't we noticed it before, Ruth?" I asked. "We've seen the back of the man's head before."

"Have we?" she said. "Have we?"

"Sweetheart, somebody must have seen it. Do you think there's never anybody behind him?"

"His hair parted, Rick, and before I ran away, I saw the hair going back over it. So you couldn't see it."

What could a guy possibly say to his wife when she talks to him like that? You're nuts? You're batty? Or the old, tired, "You've been working too hard"? She hadn't been working too hard. I make a living on my writing. Then, again, maybe she *had* been working overtime.

With her imagination.

"Are you going down with me tonight?" she asked.

"All right," I said quietly. "All right, sweetheart. Now will you go and lie down for a while?"

"But it's nothing like that."

"Sweetheart, go and lie down," I said firmly. "I'll go with you tonight, but I want you to lie down now."

She went into the bedroom and I heard the springs squeak as she sat down, then again when she drew up her legs and fell back on the pillow.

I went in a little later to put a comforter over her. She was looking at the ceiling. I didn't say anything to her. I don't think she wanted to talk to me.

"**W**HAT can I do?" I said to Phil.

Ruth was asleep. I'd sneaked across the hall to Phil's apartment.

"Maybe she saw them," he said. "Isn't it possible?"

"Yeah, sure," I said. "And you know what else is possible."

"Look, you want to go down and see the jaintor? You want to . . ."

"No," I said. "There's nothing we can do."

"You're going down to the basement with her?"

"If she keeps insisting," I said. "Otherwise, no."

"When you go, come and get us."

I frowned at him curiously. "You mean the thing is getting you, too?"

He looked at me in a funny way. I saw his throat move.

"Don't tell anyone," he said.

He glanced around. Then he turned back.

"Marge told me the same thing," he added. "She said the janitor has three eyes."

I WENT out after supper for some ice cream. Johnson was still walking around.

"They're working you overtime," I said as he started to walk beside me.

"They expect some trouble from the local gangs," he explained in that serious kidding way of his.

"I never saw any trouble," I said distractedly.

He shrugged. "They say to come here, I come."

"Mmmm."

"How's your wife?" he added.

"Fine," I lied.

"She still think the apartment is a front?"

I swallowed. "No," I said. "I've broken her of that. I think she was just needling me all the time."

He nodded and left me at the corner. For some reason, I couldn't keep my hands from shaking all the way home. I kept looking over my shoulder, too.

"**R**ICK, it's time," Ruth said.

I grunted and rolled on my side. She nudged me. I woke up sort of hazy and looked automatically at the clock. The radium numbers told me it was almost four o'clock.

"You want to go now?" I asked, too sleepy to be tactful.

There was a silence. That woke me up.

"Do you?" I insisted.

"I'm going," she said quietly.

I looked at her in the half-darkness, my heart starting to do a drum beat too heavily. My mouth and throat felt dry.

"All right," I said, "wait till I get dressed."

She was dressed already. I heard her in the kitchen making some coffee while I put on my clothes. There was no noise. I mean it didn't sound as if her hands were shaking. She spoke lucidly, too. But when I stared into the bathroom cabinet mirror, I saw a worried husband. I

washed my face with cold water and combed my hair.

"Thanks," I said as she handed me the cup of steaming coffee. I stood there, nervous before my own wife.

She didn't drink any coffee.

"Are you awake?" she asked. I nodded. I noticed the flashlight and the screwdriver on the kitchen table. I finished the coffee.

"I'm ready," I said, "Let's get it over with."

I felt her hand on my arm.

"I hope you'll . . ." she started. Then she turned her face.

"What?"

"Nothing," she said. "We'd better go."

The house was dead quiet as we went into the hall. We were halfway to the elevator when I remembered Phil and Marge. I told her.

"We can't wait," she said. "It'll be light soon."

"I'll just go see if they're up," I said. "It won't take a minute."

She didn't say anything. She stood by the elevator door. I went down the hall and knocked quietly on the door of their apartment. There was no answer. I glanced up the hall.

She was gone.

I felt my heart lurch. Even though I was sure there was no danger in the basement, it scared me.

"Ruth!" I called out and headed for the stairs.

"Wait a second!" I heard Phil yell from his door.

"I can't!" I shouted back, charging down.

When I got to the basement, I saw the open elevator door and the light streaming out from the inside. Empty.

I looked around for a light switch, but there wasn't any. I started to move along the dark passage as fast as I could.

"Hon!" I whispered urgently. "Ruth, where are you?"

I found her standing before a doorway in the wall. It was open.

"Now stop acting as if I were insane," she said coldly.

I gaped and felt a hand pressing against my cheek. It was my own.

She was right. There were stairs. And it was lighted down there. I heard sounds—sounds of metallic clickings and strange buzzings.

I took her hand.

"I'm sorry, baby," I said. "I'm very sorry."

Her hand tightened in mine. "Never mind that now. There's something queer about all this."

I nodded. Then I said. "Yeah," realizing she couldn't see my nod in the darkness.

"Let's go down," she said.

"I don't think we better," I argued.

"We've got to know," she insisted as if the entire problem had been assigned to her.

"But there must be someone down there."

"We'll just peek."

She pulled me and I guess I felt too ashamed of myself to pull back. We started down. Then it came to me—if she was right about the doorway and the engines, she must be right about the janitor and he must really have . . .

I felt a little detached from reality. East 7th Street, I told myself again. An apartment house on East 7th Street. It's all real.

I couldn't quite convince myself.

We stopped at the bottom and just stared.

Engines, all right. Fantastic engines. And, as I looked at them, their structure, it occurred to me what kind of engines they were. I'd written some science articles and read a lot more.

I felt dizzy. You can't adapt quickly to something like that, to be plunged from a stone apartment house basement into this . . . this storehouse of energy.

It got me.

I DON'T know how much time passed, but I finally realized we had to get out of there and report it. We had to do something. First of all, get out, though.

"Come on," I said.

We moved up the steps, my mind working like an engine itself, fast and furious, spinning out ideas and theories. All of them crazy. All of them acceptable. Even the craziest one.

It was when we were moving down the basement hall.

We saw the janitor coming at us.

It was still dark, even with the little light that was coming from the early morning haze. I grabbed Ruth and we ducked behind a stone pillar. We stood there holding our breaths, listening to the sound of his approaching shoes.

He passed us. He was holding a flashlight, but he didn't play it around. He just moved straight for the open door.

As he came into the patch of light from the open doorway, he stopped. His head was turned away. The guy was facing the stairway.

But he was looking at us.

It knocked out what little breath I had left. I just stood there and stared at that eye in the back of his head. And, although there wasn't any face around it, that ghastly eye had a smile that went with it. A nasty, self-certain and frightening smile. He saw us and he was amused and didn't have to do a thing about it.

He went through the doorway

and the door thudded closed behind him and the stone wall segment slid down and shut it from view.

We stood there shivering.

"You saw it," she finally said.

"Yes."

"He knows we saw those engines and still he didn't do anything."

We went on talking after we got in the elevator.

"Maybe there's nothing really wrong," I said, "Maybe . . ."

Then I stopped. I remembered those engines. I remembered what kind they were.

"What shall we do?" she asked, scared.

I put my arm around her for comfort. But I was scared, too.

"We'd better get out," I said. "Fast."

"Like this? Without packing?"

"We'll get our stuff together and leave before morning. I don't think they can do . . ."

"They?" she interrupted.

Why had I said that? But it had to be a group. The janitor couldn't have made or even assembled those engines all by himself.

I think it was the third eye that cemented my theory. And when we stopped in to see Phil and Marge and they asked us what happened, I told them what I thought. I don't think it surprised Ruth much. She probably

had decided the same herself. What I said was:

"I think the house is a rocket ship."

Phil grinned, then stopped when he saw I wasn't trying to kid him.

"*What?*" Marge asked blankly, not getting it at all.

"I know it sounds crazy," I said, sounding more like my wife than she did, "but those engines are rocket engines. I don't know how they . . ." I shrugged helplessly at the whole idea. "All I know is that they're rocket engines."

"That doesn't mean it's a—*a ship?*" Phil finished weakly, switching from statement to question in mid-sentence.

"Yes," said Ruth.

And I shuddered. That seemed to settle it. She'd been right too often lately.

"What's the point?" Marge asked. "Why?"

"If you figure it out," said Ruth, "it makes sense."

WE all turned toward her.

"How, baby?" I asked, afraid to be asking.

"That janitor," she said. "He's not a man. We know that. That third eye makes it a positive fact. I mean for sure."

"You telling me the guy actually has one?" Phil asked incredulously.

I nodded. "He has one," I said. "I saw it."

"Oh, my God," he said.

"He's not a man," Ruth repeated. "Humanoid, yes, but not from Earth. Except for the eye, he might look just about like us. But he might be completely different, so different that they'd change his form. Give him that extra eye just to keep track of us when we didn't know he was."

Phil ran a shaking hand through his hair. "This is crazy," he said.

He sank down into a chair. So did the girls.

I didn't. I felt uneasy about sticking around. I thought we should grab our hats and run. They didn't seem to feel in immediate danger. I finally decided it wouldn't hurt to wait until morning. Then I'd tell Johnson or somebody. Nothing could happen right now.

"This is crazy," Phil said again.

"I saw those engines," I stated. "They're really there. You can't get away from that fact."

"Listen," Ruth said, "they're probably extraterrestrials."

"What are you talking about?" Marge demanded irritably. She was good and afraid, I saw.

"Hon," I contributed weakly, "you've been reading too many science fiction magazines."

Her lips drew together. "You thought I was crazy when I sus-

pected this place. You thought so when I told you I saw those engines. You thought so when I told you the janitor had three eyes. Well, I was right every time. Now, lay off the imagination business. You need to do some guessing to explain all those things. Even you'll admit they don't happen every day — as far as we know."

I shut up.

"What if they're from another planet?" she rephrased, for Marge's benefit. "Suppose they want some Earth people to experiment on. To observe . . ." she amended, though I don't know for whose benefit. But the idea of being experimented on by three-eyed janitors from another planet had something revolting about it.

"What better way," Ruth was saying, "of getting people than to build a rocket ship that looks like an apartment house, rent it out cheap and get it full of people fast?"

She looked at us without yielding an inch.

"And then," she said, "just wait until some morning, early, when everybody is asleep and . . . good-bye, Earth."

It was crazy, but I'd been shrewdly practical—and wrong—three times. I couldn't afford to doubt now. It wasn't worth the risk. And I sort of felt she was right.

"But the whole house?" Phil was saying. "How could they get it . . . in the air?"

"If they're from another planet, they're probably centuries ahead of us in space travel."

Phil started to answer. He faltered. Then he said, "But it doesn't *look* like a ship."

"The house might be a shell over the ship," I said. "It probably is. Maybe the ship just includes the bedrooms. That's all they'd need. That's where everybody would be in the early morning hours if . . ."

"No," Ruth said. "They couldn't knock off the shell without attracting too much attention."

We were all silent, laboring under a thick cloud of confusion and half-formed fears. Half-formed because you can't shape your fears of something when you don't even know what it is.

"Suppose it is a building," Ruth said. "Suppose the ship is *outside* of it."

Marge was practically lost. She got angry because she was lost. "There's nothing outside the house. That's obvious!"

"Those people would be way ahead of us in science," Ruth said. "Maybe they've mastered invisibility of matter."

We all squirmed at once, I think.

"Babe," I said.

"Is it possible?" Ruth challenged.

I sighed. "It's possible. I don't know what is or isn't any more."

We were quiet.

"Listen," Ruth said.

"No," I cut in. "You listen. I think maybe we're going overboard on this thing. But there are engines in the basement and the janitor *does* have three eyes. On the basis of that, I think we have enough reason to clear out. Tonight."

We all agreed on that anyway.

"We'd better tell everybody in the house," Ruth said. "We can't leave them here."

"It'll take too long," Marge argued.

"No, we have to," I said. "You pack, babe. I'll tell them."

I headed for the door and grabbed the knob.

It didn't turn.

A BOLT of panic drove through me. I grabbed at it and yanked hard. I thought for a second, fighting down fear, that it was locked on the inside. I checked.

It was locked on the outside.

Marge was ready to scream. You could sense it bubbling up in her.

"It's true," Ruth said, horrified. "Oh, my God, it's all true, then!"

I made a dash for the window.

The place began to vibrate, as if we were about to get hit by an earthquake. Dishes started to rattle and fall off their shelves. We heard a chair crash onto its side in the kitchen.

"What is it?" Marge cried.

Phil grabbed for her as she began to whimper. Ruth ran to me and we stood there, frozen, feeling the floor shake under our feet.

"The engines!" Ruth suddenly screamed. "They're going *now*!"

"They have to warm up!" was my wild guess. "We can still get out!"

I let go of Ruth and grabbed a chair. For some reason I felt that the windows would be automatically locked, too.

I hurled the chair through the glass. The vibrations were getting worse.

"Quick!" I shouted over the noise. "Out on the fire escape! Maybe we can make it!"

Impelled by panic and dread, Marge and Phil came running over the shaking floor. I almost shoved them out through the gaping window hole. Marge tore her skirt. Ruth cut her finger. I went last, dragged a glass dagger through my leg. I didn't even feel it, I was so keyed up.

I kept pushing them, hurrying them down the fire escape steps. Marge caught a heel in between two gratings and her shoe came

off. She half limped, half fell down the orange-metal steps, her face white and twisted with fear. Ruth in her loafers clattered down behind Phil. I came last, shepherding them frantically.

We heard windows crashing above and below. We saw an older couple ahead of us crawl out hurriedly and start down. They held us up.

"Look out, will you!" Marge shouted at them in a fury.

They cast a frightened glance over their shoulders.

Ruth looked back at me. "Are you coming?" she asked quickly, her voice between a sob and a scream.

"I'm here," I said breathlessly. I felt as if I were going to collapse on the steps.

They seemed to go on forever.

At the bottom was a ladder. We saw the old lady drop from it and cry out in pain as her ankle twisted under her. Her husband climbed down and helped her up. The building was vibrating harshly now. We saw dust scaling out from between the bricks.

My voice joined the throng, all crying the same word: "Hurry!"

I saw Phil drop down. He caught Marge, who was sobbing in fright. I heard her half-articulate, "Oh, thank God!" as she landed. They started up the alleyway. Phil looked back over

his shoulder at us, but Marge dragged him on.

"Let me go first!" I snapped quickly. Ruth stepped aside. I swung down the ladder and dropped, felt the sting in my insteps, a slight pain in my ankles. I looked up, extended my arms.

An old man behind Ruth was trying to shove her aside so he could jump down.

"Look out!" I yelled, like a raging animal, reduced suddenly by fear and concern. If I'd had a gun, I'd have shot him.

RUTH let the old man go by. He scrambled to his feet, breathing feverishly, and ran down the alley. The building was shaking and trembling. The air was filled with the roar of the engines now.

"Ruth!" I yelled.

She dropped and I caught her. We regained our balance and started up the alley. I could hardly breathe with that stitch in my side.

As we dashed into the street, we saw Johnson moving through the ranks of scattered people, trying to herd them together.

"Here now!" he was calling.

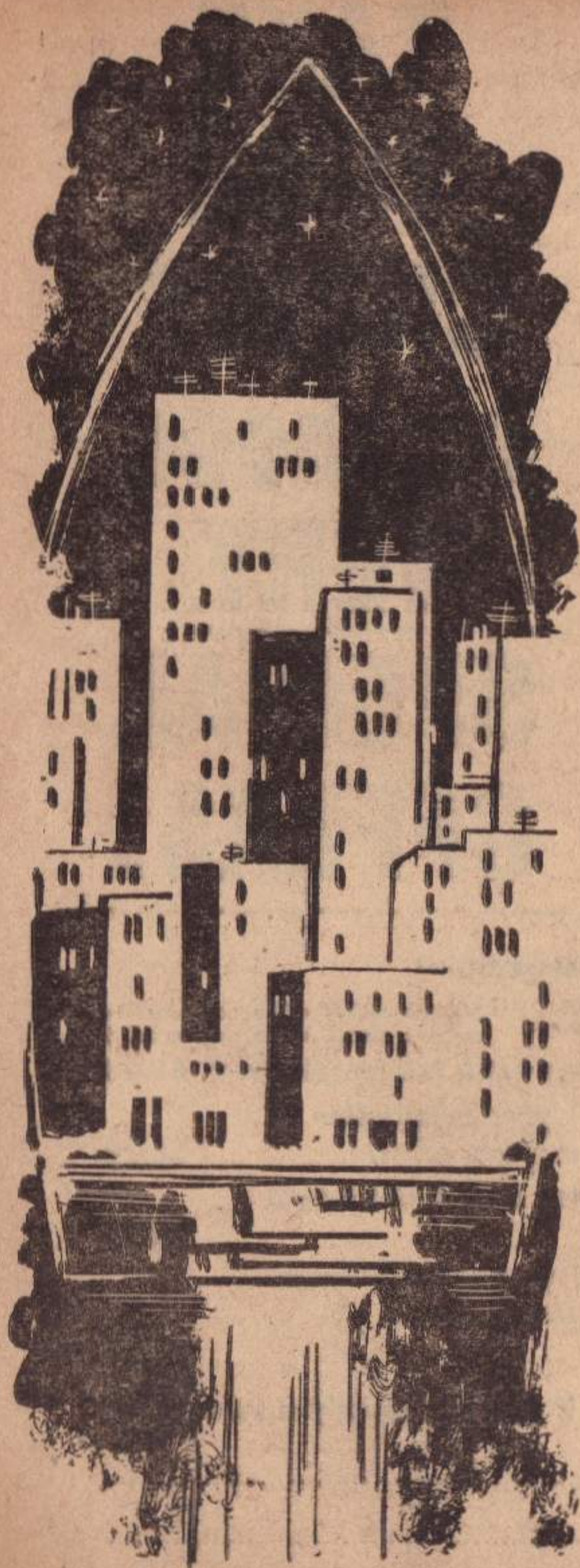
"Take it easy!"

We ran up to him.

"Johnson!" I said, "The ship is . . ."

"Ship?" He looked blank.

"The house! It's a rocket ship!"



It's . . ." The ground shook wildly.

Johnson turned away to grab somebody running past.

My breath caught. Ruth gasped, then threw her hands over her face and shrieked in horror.

Johnson was still looking at us. With that third eye. The one that had a smile in it.

"No!" Ruth said. "No!"

And then the sky, which was growing light, grew dark. My head snapped around. Women were screaming their lungs out in terror. I looked in all directions.

Solid walls were blotting out the sky.

"We can't get out," she said. *"It's the whole block."*

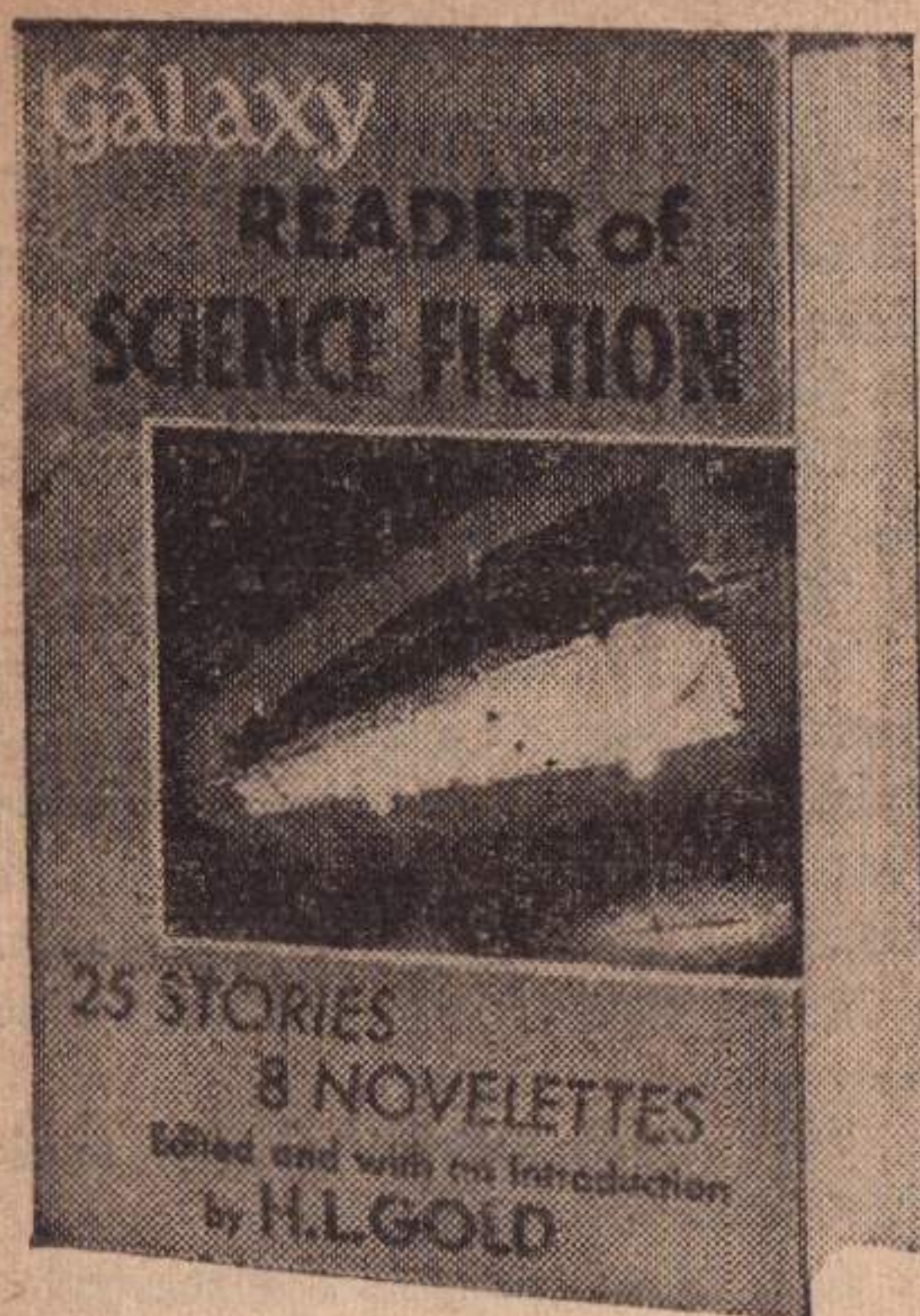
And then the rockets started.

—RICHARD MATHESON

PLEASE!

Willy Ley wants your questions and promises to answer every one of them either by mail or in **FOR YOUR INFORMATION**. But here are his problems: (1) letters that contain question after question, in one case totaling sixteen; (2) illegibility.

Don't throw at him everything that's ever puzzled you in science; let him have them a few queries at a time — no more than two or three. If you have difficult handwriting and no typewriter, print your letters. He'll appreciate the courtesy and so will **GALAXY**.



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**THE BEST FROM FANTASY
AND SCIENCE FICTION.**

*Edited by Anthony Boucher and
J. Francis McComas. Little,
Brown & Co., Boston, 1952. xiv
+ 214 pages, \$2.75*

HERE is a representative sampling of the backfiles of the fine Boucher-McComas periodical. Not really a science fiction collection, since only 8 out of 19 of its pieces can even remotely be classed as such, the book is a picture of the whole field of fantasy—the weird, the

supernatural, the symbolical, the fanciful.

Science fiction addicts will like Cleve Cartmill's "Huge Beast," Martin Gardner's "No-Sided Professor," Idris Seabright's "The Listening Child," Alan Nelson's "Narapoia" (delightful!), Oliver LaFarge's slightly leaden "John the Revelator," Winona McClintic's "In the Days of Our Fathers," Will Stanton's "Barney," and H. F. Heard's magnificently horrid "The Collector." They may sniff at the other stories, but people

of less narrow tastes will find the whole collection pleasant.

Such wholly joyful fancies as James Stephens' immortal "Threepenny Piece," Robert Arthur's "Postpaid to Paradise," and H. Nearing's "Mathematical Voodoo" prove that fantasy has great vigor and appeal. They also reveal the untenability of the editors' claim that fantasy and science fiction are almost interchangeable. I can't imagine any reader mistaking these whimsies for science fiction.

The outstanding quality of the Boucher-McComas magazine is the high quality of its contents. It may not be all science fiction, friends—but much of it is first-rate writing.

IMAGINATION UNLIMITED. Edited by Everett F. Bleiler and T. E. Dikty. Farrar, Straus and Young, Inc., New York, 1952. xiii + 430 pages, \$3.50

ANOTHER "idea" collection, and one of the thinnest yet, this contains 13 stories for \$3.50. Eight are grade A; the other five average C. Not bad—but not good enough.

The idea behind the anthology is that each story represents a science; the learned commentary with which the editors tie the stories to their respective

sciences is elephantinely ponderous. I can't think of a better way to frighten off potential readers. Furthermore, to palm off a mere baker's dozen of stories as a full-edged anthology on the basis that it is a fair representation of the science in science fiction is not easy for the irascible undersigned to accept.

We can be thankful for the good stories, of course. Ted Sturgeon's "What Dead Men Tell" represents the fanciful mathematics of topology fancily; Ray Bradbury's pure fantasy "Referent" stands for philosophy—not, of course, a science at all.

The physical sciences suffer: Of four stories, only one is memorable, and that an ancient from 1934, Raymond Z. Gallun's overwritten but deeply felt "Old Faithful," about a Martian in communication with Earth. This represents astronomy. Malcolm Jameson's inferior "Blind Man's Buff" stands for geology and geography (and there are so many better!); Ross Rocklynne's infantile "Pressure" for chemistry; and Philip Latham's "The Xi Effect," which continues this one-stringed author's end-of-the-world phobia into ridiculousness, stands for physics.

Of the stories representing the biological sciences, only Julian May's magnificently evocative "Dune Roller," incongruously

representing biochemistry, stands out. Harry Bates' "Alas, All Thinking!" previously anthologized by Phil Stong is good reading, but poor science fiction, since "The Time Machine" was written first. Paleontology is represented by de Camp's inconsequential "Employment."

The social and psychological sciences do very well indeed—something of a commentary on the trend in science fiction. Grade A: Peter Phillips' "Dreams Are Sacred," Kris Neville's "Hold Back Tomorrow," John Berryman's very strong "Berom," and Frank Robinson's fine "The Fire and the Sword."

DESTINATION: UNIVERSE! by A. E. van Vogt. Pellegrini and Cudahy, New York, 1952. xv + 295 pages, \$3.00

THE WEAPON MAKERS by A. E. van Vogt. Greenberg: Publisher, New York, 1952. 220 pages, \$2.75

DESTINATION: Universe! is van Vogt's first collection of novelets and short stories, and of all his books it shows forth most meaningfully the real dimensions of his talent. A very important talent it is, too. You can jibe at his super-impossible creations; you can call him fantasist and supernaturalist; you can (with some justice) rebel against the

coldness of his writing and the woodenness of his characterizations. But you will still have to admit, after reading the samples in this book from his more than a million words of science fiction, that he is one of the great seminal influences in the field, and has one of the most superb imaginations of all time.

Of the ten tales, five have been anthologized previously, five have not. Those anthologized include: "Far Centaurus," "The Monster," "The Enchanted Village," "Dear Pen Pal," and "The Search"—all five Class A stories. Unanthologized tales include: "Dormant" (not one of my favorites), "A Can of Paint" (minor), "Defense" (very powerful and shocking), "The Rulers" (from one of his Complicated Periods), and "The Sound" (not tops).

Also revealing in a pleasantly unassuming way is the introduction to the collection. It is a pleasure to read a preface that does not try to present a complete philosophy of science fiction in one mushy scoopful of sententious blather and pseudo-omniscient magesterialism.

The Weapon Makers, our second van Vogt of the month, is one of his largest, most effective, and sometimes most hollow-sounding concepts.

After all, what can you say about any van Vogt book from

his really Big Period (roughly 1940-1949) except that it is Star stuff, despite its bombast and its blithe impossibilities?

Here in this book the "inventor" of the magnificent sociological concept of The Weapon Shops (see the first book in the series, *The Weapon Shops of Isher*, published by Greenberg in 1951) turns out to be the world's only immortal. As Robert Hedrock, he shepherds the Isher civilization through one of its most severe crises by marrying the Empress Innelda and at the same time by manipulating matters so that her greatest enemies, the people of the Weapon Shops, are able to take the secret of interstellar travel away from her and give it to the people.

It is a fascinating book. You cannot put it down. But you can, perhaps chuckle at yourself for enjoying such patently incredible stuff!

THE ATOM CLOCK by Cornel Lengyel. Fantasy Publishing Co., Inc., Los Angeles, 1951. 66 pages, paper, \$1.00

THIS is a well-intentioned but loose-lipped one-act play about a Worker's attempt to rebel against the Military Control of Atomic Energy. Written in a style reminiscent of the dancing of Mary Wigman, (i.e., it jerks and

drools), it appears quite unrealistic, mushy and pseudo-profound, despite its obviously sincere intentions. It won a Maxwell Anderson Award in 1950. Why?

FIVE ADVENTURE NOVELS by H. Rider Haggard. Dover Publications, Inc., New York, 1952. 821 pages, \$3.95

ONE of the year's best and biggest book buys, this monster omnibus contains the complete text of the following fine old pompous, fantastical, colorful, overblown adventure romances: *She, King Solomon's Mines, Allan Quatermain, Allan's Wife, and Maiwa's Revenge*. Pumped full of antique hooey though these tales are, and funny where they should not be, nevertheless I think they are vastly entertaining.

No biographical or historical data are in the book, unfortunately; so it will be recorded here that the five novels were published between 1885 (*King Solomon's Mines*) and 1889 (*Allan's Wife*), and that they are selected from a total of over 40 novels written from 1885 to 1925, when Haggard died at the age of 70.

The five stories included in this collection are, of course, among his best-known works. They should occupy a place of honor on the shelves of any collector.

—GROFF CONKLIN

THE CITY IN THE SEA

By Wilson Tucker



The Next Full Length Galaxy Science Fiction Novel at Your News Stand Soon



Who knows whether the strange events of this story might not one day occur?

This is the story of an expedition — a strange and exciting expedition of one man and an army of women.

He had come into the land of the women suddenly — and without warning. Tall, bronzed, muscular, he stood out among their pale skins and meek spirits. And when they learned of the land from which he had come — the land they hadn't even known existed — they had to follow him to it.

One man and an army of women crossing the remnants of a post-atomic United States in search of the Unknown; it was an amazing trek. Miraculous things happened to the women. New emotions rose up to plague them. Once there was a near mutiny. Another time, seven of their number were killed. But it was when they reached the city in the sea that the strangest thing of all happened. . . .

Exciting, imaginative, prophetic, THE CITY IN THE SEA is also something rare in science fiction — a compellingly human story.



**Watch For It
On Sale In August**

gravy planet

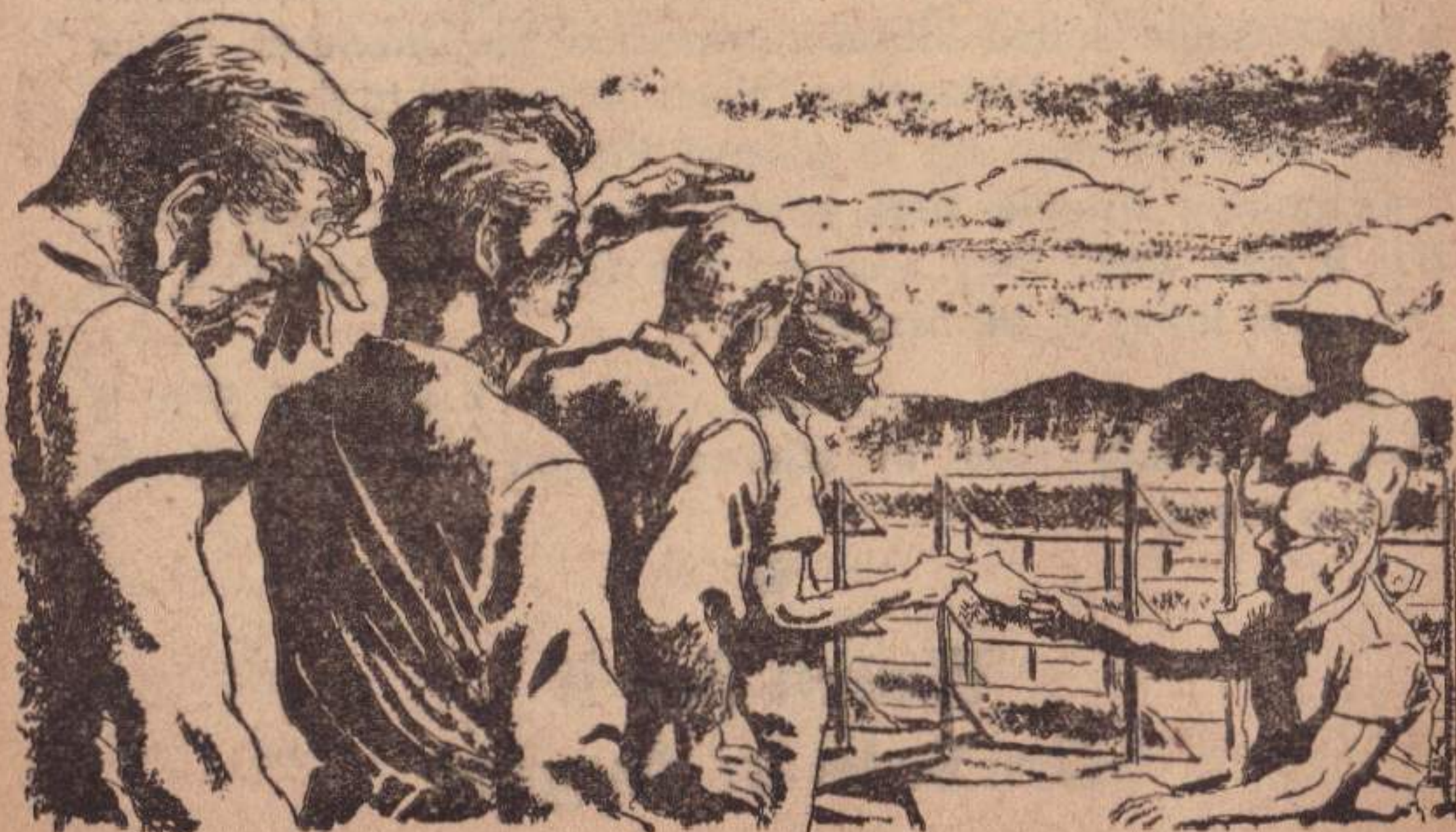
PART 2 OF A 3 PART SERIAL

A displaced person in a Utopia is worse off than in any other kind of society . . . especially if he happened to help build it!

SYNOPSIS

Mitchell Courtenay, the narrator of this story, had three grave problems—his wife Kathy, who refused to finalize their con-

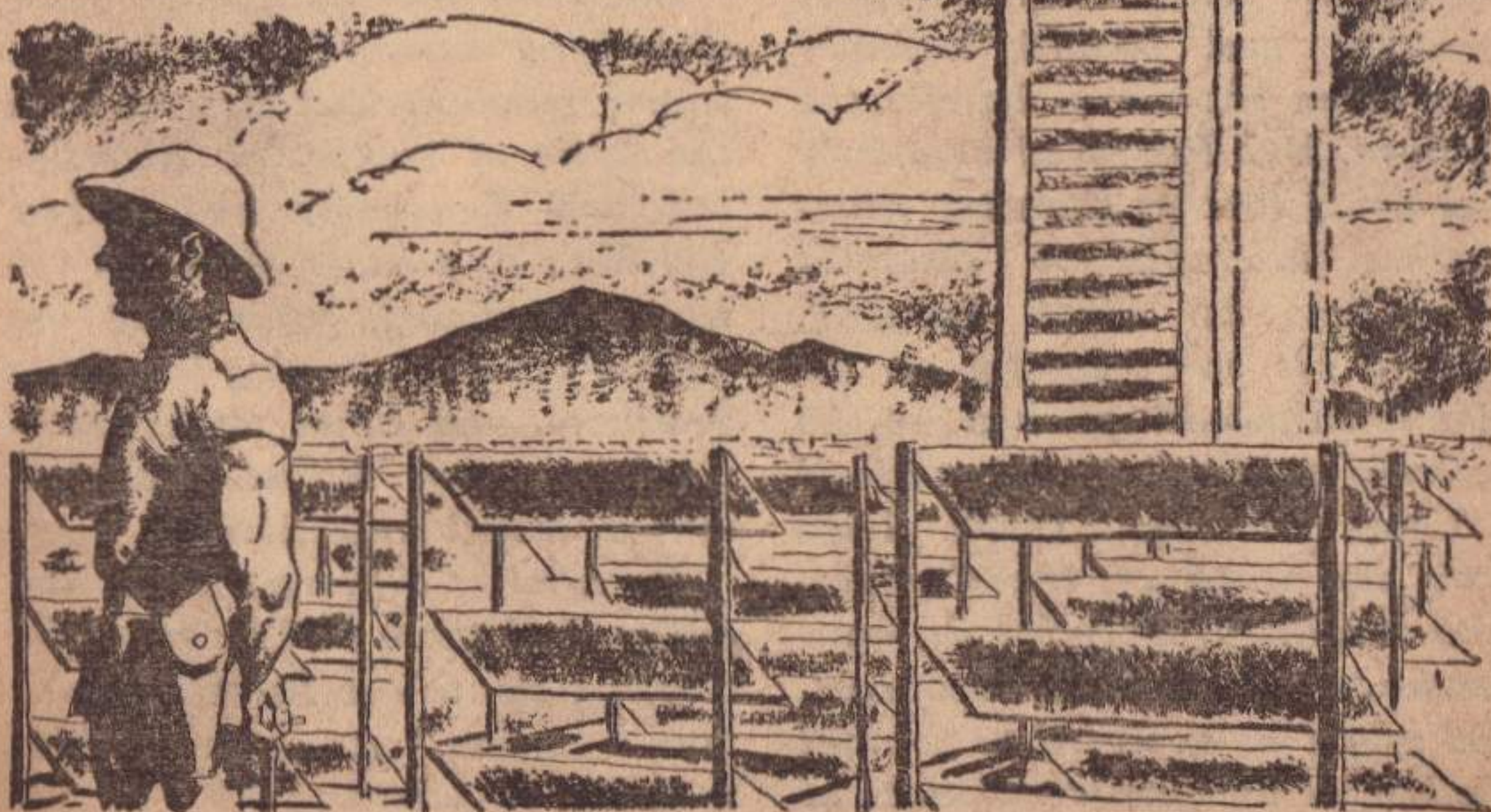
ditional marriage; the planet Venus; and the Conservationists, commonly known as "Connies," an outlawed organization.



By
FREDERIK POHL
and
C. M. KORNBLUTH

Illustrated by **DON SIBLEY**

Kathy, a brilliant surgeon, disliked Courtenay's ideals. As a young star class copysmith in Fowler Schocken Associates, the



largest advertising agency on Earth, Courtenay was dedicated to the highest principle of this completely free enterprise society: Sales. Only through sales, he held, could the economy expand indefinitely. Kathy bitterly wanted to know why it had to, a question that, to Courtenay, was little short of commercial heresy. Added to this marital strain was his jealousy of Kathy's liking for Jack O'Shea, the midget space pilot who was the only person to reach Venus thus far.

Surprisingly, Courtenay had been selected by Fowler Schocken to head the Venus Project, a contract granted by the Incorporated United States of America to develop and exploit Earth's sister planet. He had expected Matt Runstead, an older executive in the company, to be angry and jealous, for Runstead had higher seniority and should logically have been chosen to handle the account. But Runstead evidently was going further than the usual routine attempts to discredit Courtenay by lying, cajoling, bribing his staff, spying on his plans—Runstead seemed to be actively sabotaging the project!

That, however, could have been the work of the Connies, who fought savagely for the conservation of natural resources, and might be expected to combat the use of enormous amounts of

metals and fuels needed to colonize and exploit Venus.

As proof of that, there were the two attempts on Courtenay's life — once when he was in Washington to interview O'Shea, the tiny space pilot, and a 'copter cargo nacelle almost killed him; another when a gunman in a passenger 'copter tried to shoot him through the window of his apartment. The possibility of a commercial feud was ruled out by Fowler Schocken when Courtenay questioned him about it; there would have been court hearings, counter-claims, perhaps even injunctions, before they were notified of a feud. Obviously, no entrepreneur would be guilty of the high commercial crime of murder without notification, so it must have been the Connie crackpots.

But then something even more disturbing occurred. Testing consumer reaction had always been the basis of successful advertising, and Courtenay had picked Cal-Mex to sample attitudes toward colonizing, supporting the gigantic project, buying Venusian products, and other such essentials . . . but Runstead's staff sent in faked information!

Enraged, Courtenay fired the entire staff there and went to the South Pole, where Runstead was "on vacation," to confront him with his treachery.

Courtenay found him on the slope of Starrzelius Glacier. But Runstead was ready . . . he cut Courtenay down with a slash of skis across the Polar helmet, left him dazed, freezing, beyond hope of rescue. As the fierce cold reached into Courtenay's unheated suit, he had only two thoughts. One was of Kathy. The other was of death.

VII

IT was a throbbing, strumming inferno, complete with red fire and brutish-looking attendant devils. It was exactly what I would have consigned a Taunton copysmith to. I was confused to find myself there.

The confusion did not last long. One of the attendant devils shook my shoulder roughly and said: "Gimme a hand, sleepy. I gotta stow my hammock." My head cleared and it was very plain that he was simply a lower-class consumer.

"Where's this?" I asked him. "Did you bring me back to the infirmary in Little America?"

"Jeez, you talk funny," he commented. "Gimme a hand, will ya?"

"Certainly not!" I told him. "I'm a star class copysmith."

He looked at me pityingly, said, "Punchy," and went away into the strumming, red-lit darkness.

I stood up, swaying, and grabbed an elbow hurrying past from darkness to darkness. "Excuse me. Is this a hospital?"

The man was another consumer, worse-tempered than the first. "Leggo my yarm!" I did. "Ya want on sick call, ya wait until we land."

"Land?"

"Yah, land. Listen, punchy, don't ya know what ya signed up for?"

"Signed up? No, I don't. But you're being too familiar. I'm a star class copysmith—"

"Ah," he said wisely. "I can fix ya up. Justa minnit, punchy. I'll be right back wit' the stuff."

He was, too. "The stuff" was a little green capsule. "Only five hunnerd. Maybe the last one on board. Ya wanta touch down wit' the shakes? Nah! This'll straighten ya out fer landing—"

"Landing where?" I yelled. "I don't want your dope. Just tell me where I am and what I'm supposed to have signed up for and I'll take it from there!"

He looked at me closely and said: "Ya got it bad. A hit in the head, maybe? Well, punchy, yer in the Number Six Hold of the Labor Freighter *Thomas R. Malthus*. Wind and weather, immaterial. Course, 273 degrees. Speed, 300; destination, Costa Rica; cargo, slobs like you and me for the *Chlorella* plantations."

"You're—"

"Downgraded," he said savagely, and stared at the green capsule in the palm of his hand. Abruptly he gulped it and went on. "I'm gonna hit the comeback trail, though. I'm gonna introduce new and efficient methods in the plantations. I'll be a foreman in a week. I'll be works manager in a month. I'll be a director in a year. And then I'm gonna buy the Cunard Line and plate all their rockets with solid gold. If you don't like gold, I'll get platinum. If you don't like—"

I inched away and he didn't notice. He kept babbling his hop-head litany. It made me glad I'd never taken to the stuff. I came to a bulkhead and sat down hopelessly, leaning against it. I wanted to get back to New York, find out what kind of stunt Runstead had pulled and why, get back to Kathy, and my friendship with Jack O'Shea and my big job at Fowler Schocken. I had things to do.

One of the red lights said Crash Emergency Exit. I thought of the hundreds of people jammed in the hold trying to crowd out through the door, and shuddered.

"Excuse me, my friend," somebody said hoarsely to me. "You'd better move." He began to throw up, and apparently containers weren't issued aboard labor

freighters. I rolled the emergency door open and slid through.

"Well?" growled a Burns Detective Agency guard.

"I want to see a ship's officer," I said. "I'm here by some mistake. My name is Mitchell Courtenay. I'm a copysmith with the Fowler Schocken Associates."

"Number," he snapped.

"16-156-187," I told him, and I admit that there was a little pride in my voice. You can lose money and health and friendship, but they can't take a low Social Security number away from you . . .

He was rolling up my sleeve, not roughly. The next moment I went spinning against the bulkhead with my head rattling from a ham-handed slap. "Get back between decks!" the guard roared. "Yer not on an excursion and I don't like yer funny talk!"

I stared incredulously at the pit of my elbow. The tattoo read: "1304-9974-1416-156-187723." My number was buried in it, but the inks matched perfectly. The style of lettering was very slightly off — not enough for anybody to notice but me.

"Waddaya waiting for?" the guard demanded. "You seen yer number before, ain't ya?"

"No," I said evenly, but my legs were quivering. I was scared — terribly scared. "I never saw this number before. It's been tat-

tooed around my real number. I'm Courtenay, I tell you. I can prove it. I'll pay you —" I fumbled in my pockets and found no money. I abruptly realized that I was wearing a strange and shabby suit of Universal apparel.

"So pay," the guard said impassively.

"I'll pay you later," I told him. "Just get me to somebody responsible—"

A natty young flight lieutenant in Panagra uniform popped into the narrow corridor. "What's going on here?" he asked the guard. "The hatchway light's still on. Can't you keep order between decks? Burns gets a fitness report from us, you know." He ignored me completely.

"I'm sorry, Mr. Kobler," the guard said, saluting and coming to a brace. "This man seems to be on the stuff. He came out and gave me a spiel that he's a star class copysmith on board by mistake."

"Look at my number!" I yelled at the lieutenant.

His face wrinkled as I thrust my bared elbow under his nose.

"That's a high number, fellow. What do you expect to prove by showing me that?"

"My real number is 16-156-187. See? Before and after that, there's a different lettering style! It's been added to!"

Holding his breath, the lieu-

tenant looked very closely. He said: "Umm. Just barely possible. Come with me." The guard hastened to open a corridor door for us. He looked scared.

The lieutenant took me through a roaring confusion of engine rooms to the purser's hat-box-sized office. The purser was a sharp-faced gnome who wore his Panagra uniform as though it were a sack.

"Show him your number," the lieutenant directed me, and I did. To the purser he said: "What's the story on this man?"

The purser slipped a reel into the reader and cranked it. "1304-9974-1416-156-187723," he read. "Groby, William George; 26; bachelor; broken home (father's desertion) child; third of five sibs; H-H balance, male 1; health, 2.9; occupational class 2 for seven years; 1.5 for three months; education 9; signed labor contract B." He looked up at the flight officer. "A very dull profile, Lieutenant. Is there any special reason why I should be interested in this man?"

"He claims he's a copysmith in here by mistake. He says somebody altered his number. And he speaks a little above his class."

"A broken-home child, especially a middle sib from the low levels, reads and views incessantly, trying to better himself. But you'll notice—"

"That's enough of that," I said curtly to the little man. "I'm Mitchell Courtenay. I can buy you and sell you without straining my petty cash account. I'm in charge of the Fowler Schocken Associates Venus Section. I want you to get New York on the line immediately and we'll wind up this farce. Now jump, damn you!"

The flight lieutenant looked alarmed and reached for the phone, but the purser smiled and moved it away from his hand. "Mitchell Courtenay, are you?" He took another reel and put it in the viewer. "Here we are," he said, after a little cranking. The lieutenant and I looked.

It was the front page of the *New York Times*. The first column contained the obituary of Mitchell Courtenay, head of Fowler Schocken Associates Venus Section. I had been found frozen to death on Starrzelius Glacier near Little America. I had been tampering with my power pack, and it had failed. I read on long after the lieutenant had lost interest. Matt Runstead was taking over Venus Section. I was a loss to my profession. My wife, Dr. Nevin, had refused to be interviewed. Fowler Schocken was quoted in a ripe eulogy of me. I was a personal friend of Venus pioneer Jack O'Shea, who had expressed shock and grief at the news.

The purser said: "I picked that up in Capetown. Lieutenant, get this silly son of a bitch back between decks, will you, please?"

The Burns guard was called in. He hammerlocked me all the way back to Number Six Hold, shoved me through the door into the red darkness so hard that I bounced off somebody. After the relatively clear air of the outside, the stink was horrible.

"What did you do?" the human cushion asked amiably, picking himself up.

"I tried to tell them who I am . . ." That wasn't going to get me anywhere. "What happens next?" I asked.

"We land. We get quarters. We go to work. What contract are you on?"

"Labor contract B, they said."

He whistled. "I guess they really had you, huh?"

"What do you mean? What's it all about?"

"Oh, you were blind? Punchy? Too bad. B contract's five years. For refugees, morons and anybody else they can swindle into signing up. There's a conduct clause. I got offered the B, but I told them if that was the best they could do, I'd just go out and give myself up to Brinks Express. I talked them into an F contract — they must have needed help real bad. It's one year and I can buy outside the com-

pany stores and privileges like that."

I held my head to keep it from exploding. "It can't be such a bad place to work," I said. "Country life — farming — fresh air and sunshine."

"Um," said the man in an embarrassed way. "It's better than chemicals, I guess. Maybe not so good as power-fishing. You'll find out soon enough."

THERE wasn't any landing-ready signal. We just hit, and hit hard. A discharge port opened, letting in blinding tropical sunlight. It was agony after the murky hold. What swept in with it was not country air, but a gush of disinfectant aerosol. I untangled myself from a knot of cursing laborers and flowed with the stream toward the port.

"Hold it, stupid!" said a hard-faced man wearing a plant-protection badge. He threw a number plaque on a cord around my neck. Everybody got one and lined up at a table outside the ship.

It was in the shadow of the Chlorella plantation, a towering eighty-story structure like office "In-and-Out" baskets stacked up to the sky. There were mirrored louvers at each tier. Surrounding the big buildings were acres of eye-stabbing glare. I realized that these were more mirrored lou-

vers to catch the Sun, bounce it off other mirrors inside the tiers and onto the photosynthesis tanks. It was a spectacular though not uncommon sight from the air. On the ground it was plain hell.

I should have been planning, planning. But the channels of my mind were choked by: "From the sun-drenched plantations of Costa Rica, tended by the deft hands of independent farmers with pride in their work, comes the juicy-ripe goodness of Chlorella Proteins . . ." I had written those words.

"Keep moving!" a plant-protection man bawled.

I shaded my eyes and shuffled ahead as the line moved past the table.

A dark-glassed man at the table was asking me: "Name?"

"Mitchell Court—"

"That's the one I told you about," said the purser's voice.

"Okay, thanks." To me: "Groby, we've had men try to bug out of a B contract before this, you know. Are you up on the Costa Rican code of business law?"

"Of course not! All I'm trying to tell you—"

"Don't interrupt; you'll be interested. Certain pharmaceuticals may be administered to a contract-breaker in an attempt to correct his anti-social, anti-

business, anti-sales attitude." He looked squarely at me. "I see you understand."

I did. *Cerebrin*. Twenty years being sandpapered, strangled, deafened and blinded continuously, wrapped up in one five-second dose. I understood, all right.

"What's your name, Groby?" the man in the dark glasses asked me.

"Groby," I said hoarsely.

"First name? Educational level? H-H balance?"

"I don't remember. But if you'll give them to me on a piece of paper, I'll memorize them."

I heard the purser laugh and say: "He'll do."

"All right, Groby," the man in dark glasses said genially. "No harm done. Here's your profile and assignment. We'll make a scum skimmer out of you yet. Move on."

I moved on. A plant protection man grabbed my assignment and bawled at me: "Skimmers that way."

"That way" was under the bottom tier of the building, into light even more blinding, down a corridor between evil-smelling, shallow tanks, and at last through a door into the central pylon of the structure. There was a well-lit room which seemed like twilight after the triply reflected tropical Sun outside.

"Skimmer?" said a man. I

blinked and nodded at him. "I'm Mullane, shift assignment." He peered at my profile card. "We need a skimmer on the 67th tier and we need a skimmer on the 41st tier. Your bunk's going to be on the 43rd tier of the pylon. Which would you rather work on? I ought to mention that we don't have elevators for skimmers and the other Class 2 people."

"The 41st-tier job."

"That's very sensible." He just stood there, with seconds ticking away. At last he added: "I like to see a sensible man act sensible." There was another long pause.

"I haven't any money on me," I told him.

"I'll lend you some. Just sign this note and we can settle up on payday without any fuss. It's just a simple assignment of five dollars."

I read the note and signed it. I had to look at my profile card again; I had forgotten my first name. Mullane briskly scrawled "41" and his initials on my assignment, and hurried off.

"I'm Mrs. Horrocks, the housing officer," a woman said sweetly to me. "Welcome to the Chlorella family, Mr. Groby. I hope you'll spend many happy years with us. Mr. Mullane told you this draft of crumbs—that is, the present group of contractees — will be housed on the 43rd

tier. It's my job to see that you're located with a congenial group of fellow-employees."

Her face reminded me faintly of a tarantula as she went on: "We have one vacant bunk in Dorm Seven. Lots of *nice, young* men in Dorm Seven. It means so much to be among one's *own kind* of people—"

I got what she was driving at and told her I didn't want to be in Dorm Seven.

She went on brightly: "Then there's Dorm Twelve. It's a rather rough crowd, I'm afraid, but you could carry a knife or something. Shall I put you down for Dorm Twelve, Mr. Groby?"

"What else have you got? And by the way, I wonder if you could lend me five dollars until payday."

"I'll put you down for Dorm Ten," she said, scribbling. "And of course I'll lend you some money. Ten dollars? Just sign and thumbprint this assignment, Mr. Groby. Thank you." She hurried off in search of the next sucker.

A red-faced fat man gripped my hand. "Brother, I want to welcome you to the ranks of the United Slime-Mold Protein Workers of Panamerica, Unaffiliated, Chlorella Costa Rica Local. This pamphlet will explain how the U. S. M. P. W. P. protects workers in the field from the innumerable petty rackets and abuses

that useta plague the innustry. Yer dues are checked off automatically, but this valable pamphlet is an extra."

"What's the worst that can happen to me if I don't buy it?"

"It's a long drop to the ground," he explained.

He lent me five dollars to buy the pamphlet.

I DIDN'T have to climb to Dorm Ten on the 43rd tier; there was an endless cargo net we could grab hold of. It took daring to jump on and off, and clearance was negligible. With my motion-sickness, the ride was torture, but I made it.

The dorm was jammed with about sixty bunks, three high. Since production went on only during the daylight hours, the hot-bed system wasn't in use. My bunk was all mine, twenty-four hours a day. Big deal.

A sour-faced old man was sweeping the central aisle lackadaisically when I came in. "You a new crumb?" he asked, and looked at my ticket. "There's your bunk. I'm Pine. Room orderly. You know how to skim?"

"No," I said. "Look, Mr. Pine, how do I make a phone call out of here?"

"Dayroom," he said, jerking his thumb at the room adjoining.

There was a phone and a bigish hypnoteleset and readers

and spools and magazines. I ground my teeth as the cover of *Taunton's Weekly* sparkled at me from the rack. The phone was a pay phone, of course.

I dashed back into the dorm. "Mr. Pine," I said, "can you lend me about twenty dollars? I have to make a long-distance call."

"Twenty-five for twenty?"

"Sure. Anything you say."

He scrawled out an assignment slip and I signed and thumbed it. Then he carefully counted out the money from his baggy pockets and handed it to me.

I wanted to call Kathy, but didn't dare. She might be at her apartment, the hospital or in between, and I might miss her. I dialed the fifteen digits of the Fowler Schocken Associates number after I deposited a clanging stream of coins. I waited for the switchboard to say: "Fowler Schocken Associates, good afternoon; it's *always* a good afternoon for Fowler Schocken Associates and their clients. May I help you?"

But that isn't what I heard. The phone said: "*Su numero de prioridad, por favor?*"

Priority number for long-distance calls. I didn't have one. A firm had to be rated over a billion and fast pay before it could get a long-distance priority number in four figures. So expanded

were the world's long lines that an individual priority in any number of figures was unthinkable. Naturally, that had never worried me when I made long-distance calls from Fowler Schocken. A priority number was one of the little luxuries I'd have



to learn to live without.

I hung up slowly.

I could write to everybody — Kathy and Jack O'Shea and Fowler and Collier and Hester and Tildy. Leave no stone unturned. "Dear Wife (or Boss): This is to advise you that your husband (or employee) is not really dead, but inexplicably a contract laborer for Costa Rican Chlorella and please drop everything and get him out. Signed, your loving husband (or employee), Mitchell Courtenay."

But there was the company censor to think of. And *cerebrin*.

I wandered blankly back into the dorm. The rest of the Dorm Ten people were beginning to drift in.

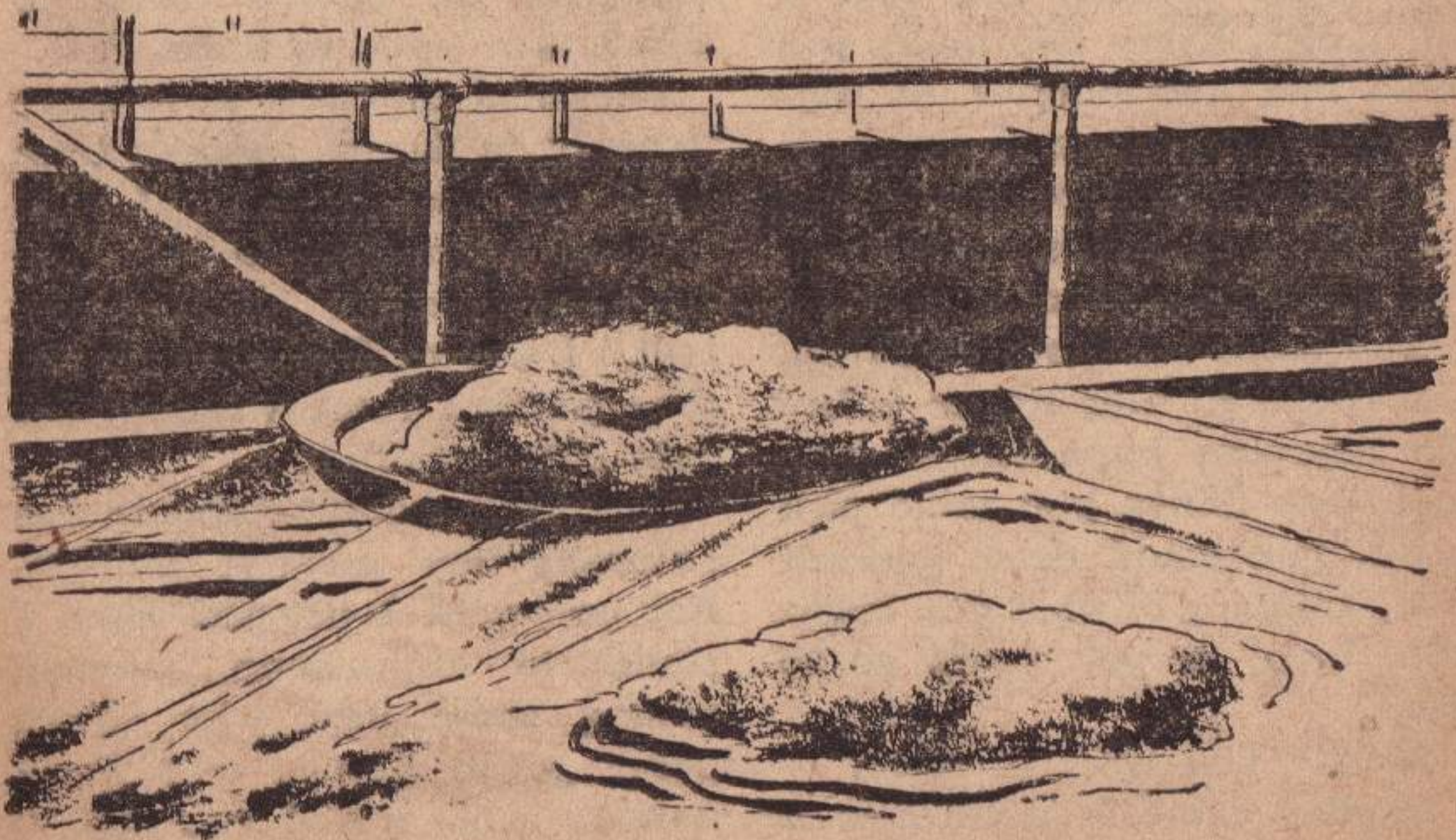
"A crumb!" one of them yelled,

sighting me.

"Court's called to order!" another one trumpeted.

I don't hold what followed against any of them. It was traditional, a break in the monotony, something they had all gone through themselves. In Dorm Seven, it would have been a memorably nasty experience, and in Dorm Twelve I might not have lived through it. Dorm Ten was just high-spirited. I paid my "fine" — more pay vouchers — and took my lumps and recited the blasphemous oath and then I was a full-fledged member.

I didn't troop with them to the mess hall for dinner. I just lay on my bunk and wished I were as dead as the rest of the world thought I was.



VIII

SCUM-SKIMMING was not hard to learn. You got up at dawn, gulped a breakfast sliced not long ago from Chicken Little and washed it down with Coffiest, then put on your coveralls and took the cargo net up to your tier. In blazing noon, from sunrise to sunset, you walked slowly and every thirty seconds or so you spotted a patch at maturity, bursting with yummy carbohydrates. You scooped up the patch with your skimmer and slung it down the well, where it would be baled, or processed into glucose to feed Chicken Little, who would be sliced and packed to feed people from Baffinland to Little America. Every hour you could drink from your canteen and take a salt tablet. Every two hours you could take five minutes. At sunset you turned in your coveralls and went to dinner—more slices from Chicken Little—and then you were on your own.

You could talk, you could read, you could go into trance before the dayroom hypnoteleset, you could buy things, you could pick fights, you could drive yourself crazy thinking of what you might have been, or you could go to sleep.

Mostly you went to sleep.

Payday came as a surprise. I

didn't know two weeks had slipped by. It left me owing Chlorella Proteins only eighty-odd dollars and a few cents. Besides the various assignments I had made, there were the Employee Welfare Fund; union dues and installment on the initiation fee; withholding tax; hospitalization (but try and get it, the older men said); and old age insurance.

One of the things I consoled myself with was the thought that when — *when*, I always said firmly—I got out, I'd be closer to the consumers than any ad man in the profession. Of course, at Fowler Schocken, we'd had our boys up from the ranks. I knew now that they had been afraid to give me the straight facts on consumers' lives and thoughts, or hadn't cared to admit them even to themselves.

I learned that ads work more strongly on the unconscious than even we had thought. I was shocked repeatedly to hear advertising referred to as "that bull." I was at first puzzled and then gratified to see it sink in and take effect anyway.

The Venus-rocket response was naturally my greatest interest. For one week I listened when I could to enthusiasm growing among those men who would never go to Venus, who knew nobody who would ever go to

Venus. I heard the limericks we had launched from Fowler Schocken Associates chuckled over, with their engineered-in message: that living on Venus increased male potency.

Ben Winston's sub-section on Folkways, I had always said, was one of the most important talent groups in the whole Schocken enterprise. They were particularly fine on riddles: "Why do they call Venus the Mourning Star?" for instance. Well, it doesn't make sense in print; but the pun is basic humor, and the basic drive of the human race is sex. And what is more essential than to channel the deepest torrential flow of human emotion into its proper directions? (I am not apologizing for those renegades who talk fancifully about the "Death Wish" to hook their sales appeals to. I leave that sort of thing to the Tauntons of our profession; it's dirty, it's immoral, I want nothing to do with it. Besides, it leads to fewer consumers in the long run, if they'd only think the thing through.)

For there is no doubt that linking a sales message to one of the great prime motivations of the human spirit does more than sell goods; it strengthens the motivation, helps it come to the surface, provides it with focus. And thus we are assured of the steady annual increment of consumers so

essential to expansion.

Chlorella, I was pleased to learn, took extremely good care of its workers' welfare in that respect. There was an adequate hormone component in the diet, and a splendid thousand-bed Recreation Room on the 50th Tier. The only stipulation the company made was that children born on the plantation were automatically indentured to Chlorella if either parent was still an employee on the child's tenth birthday.

But I had no time for the Recreation Room. I was learning the ropes, studying my environment, waiting for opportunity to come. If opportunity didn't come soon, I would make one; but first I had to study and learn.

Meanwhile, I kept my ears open for the results of the Venus campaign. It went beautifully—for a while. The limericks, the planted magazine stories, the gay little songs had their effect.

Then something went sour. The word "Venus" drifted out of the small talk. When the space rocket was mentioned, it was in connection with reference points like "radiation poisoning," "taxes," "sacrifice." There was a new, dangerous kind of Folkways material—"Didja hear the one about the punchy that got caught in his spacesuit?"

You might not have recognized

what was going on, and Fowler Schocken, scanning his daily precis of the summary of the digests of the skeletonized reports of the abstracts of the charts of progress on Venus Project, would never have the chance to question what was told him. But I knew Venus Project and I knew what was happening.

Matt Runstead had taken over.

THE aristocrat of Dorm Ten was Herrera. After ten years with Chlorella, he had worked his way up—topographically, it was down—to Master Slicer. He worked in the great, cool vault underground where Chicken Little grew and was cropped by him and other artisans. He swung a sort of two-handed sword that carved off great slabs of the tissue, leaving it to the packers and trimmers and their helpers to weigh it, shape it, freeze it, cook it, flavor it, package it and ship it off to the area on quota for the day.

He had more than a production job; he was a safety valve. Chicken Little grew and grew, as she had been growing for decades. Since she had started as a lump of poultry tissue, she didn't know any better than to grow and fill her concrete vault and keep growing, compressing her cells and rupturing them. As long as she got nutrient, she grew.

Herrera saw to it that she grew round and plump, that no tissue got old and tough before it was sliced, that one side was not neglected for the other.

With this responsibility went commensurate pay, and yet Herrera had not taken a wife or an apartment in one of the upper tiers of the pylon. He made trips that were the subject of bawdy debate while he was gone—and which were never referred to without careful politeness while he was present. He kept his two-handed slicer by him at all times, and often idly sleeked its edge with a hone. He was a man I had to know. He was a man with money—he *must* have money after ten years—and I needed it.

The pattern of the B labor contract had become quite clear: you never got out of debt. Easy credit was part of the system, and so were irritants that forced you to exercise it. If I fell behind ten dollars a week, I would owe \$1,100 to Chlorella at the end of my contract, and would have to work until the debt was wiped out. And while working, a new debt would accumulate.

I needed Herrera's money to buy my way out of Chlorella and back to New York: Kathy, my wife; Venus Section, my job. Runstead was doing things I didn't like to Venus Section. And God alone knew what Kathy was

doing, under the impression that she was a widow.

I tried not to think of Jack O'Shea and Kathy. The little man had been getting back at women for their years of contempt. Until the age of twenty-five, he had been a laughable sixty-pound midget, with a touch of grotesquerie in the fact that he had doggedly made himself a test pilot. At the age of twenty-six, he found himself the world's foremost celebrity, the first man to land a ship on Venus. The story was that he'd been setting amatory records on his lecture tours. I didn't like the story. I didn't like the way he liked Kathy or the way Kathy liked him.

AND I went through another day, up at dawn, breakfast, coveralls and goggles, cargo net, skimming and slinging for blazing hour after hour, dinner and the dayroom and, if I could manage it, a chat with Herrera.

"Fine edge on that slicer, Gus. There's only two kinds of people in the world—the ones who don't take care of their tools and the smart ones."

Suspicious look from under his Aztec brows. "Pays to do things right. You're the crumb, ain't you?"

"Yeah. First time here. Think I ought to stay?"

"You gotta stay. Contract." And he went to the magazine rack.

Tomorrow's another day.

"Hello, Gus. Tired?"

"Hi, George. Yeah, a little. Ten hours swinging the slicer. It gets you in the arms."

"I can imagine. Skimming's easy, but you don't need brains for it."

"Well, maybe some day you get upgraded. I think I'll trance for a while."

And another:

"Hi, George. How's it going?"

"Can't complain, Gus. At least I'm getting a suntan."

"You sure are. Soon you be dark like me. Haw-haw! You pass for an Indian. How'd you like that?"

"*Porque no, amigo?*"

"Hey, *tu hablas espanol! Cuando aprendes la lengua?*"

"Not so fast, Gus! Just a few words here and there. I wish I knew more. Some day, when I get a few bucks ahead, I'm going to town and see the girls."

"Oh, they all speak English, kind of. If you get a nice steady girl, it would be nice to speak a little Spanish. She would appreciate it. But most of them know 'Gimme-gimme' and the English poem about what you get for one buck. Haw-haw!"

And another day—an astonishing day.

I'D been paid again, and my debt increased by eight dollars. I'd tormented myself by wondering where the money went, but I knew.

I came off shift dehydrated, as they wanted me to be. I got a squirt of Popsie from the fountain by punching my combination—twenty-five cents checked off my payroll. The squirt wasn't quite enough, so I had another—fifty cents. Dinner was drab, as usual; I couldn't face more than a bite or two of Chicken Little. Later I was hungry and there was the canteen where I got Crunchies on easy credit. The Crunchies kicked off withdrawal symptoms that could be quelled only by another two squirts of Popsie from the fountain. And Popsie kicked off withdrawal symptoms that could only be quelled by smoking Starr cigarettes, which made you hungry for Crunchies . . .

Had Fowler Schocken thought of it in these terms when he organized Starrzelius Verily, the first spherical trust? Popsie to Crunchies to Starrs to Popsie?

And you paid six per cent interest on the money advanced you.

If I didn't get out soon, I never would. I could feel my initiative dying, cell by cell, within me. The minute dosages of alkaloid were sapping my will, but most

of all it was a hopeless, trapped feeling that things would always be this way, that it wasn't too bad, that you could go into a trance or get really lit on Popsie or maybe try one of the green capsules that floated around from hand to hand at varying quotations; the boys would be glad to wait for the money.

It had to be soon.

"Como 'sta, Gustavo?"

He sat down and gave me his Aztec grin. "*Se fumar?*" He extended a pack of cigarettes.

They were Greentips. I said automatically: "No, thanks. I smoke Starrs; they're tastier." And automatically I lit one, of course. "I don't feel so happy, *amigo*." This was it. "I'm in a very strange situation." Wait for him now.

"I figured there was something wrong. An intelligent fellow like you, a fellow who's been around. Maybe you can use some help?"

Wonderful; wonderful. "You won't lose by it, Gus. You're taking a chance, but you won't lose by it. Here's the story—"

"Sst! Not here!" he shushed me. In a lower voice he went on: "It's always a risk. It's always worth it when I see a smart young fellow wise up and begin to do things. Some day I make a mistake, *seguro*. Then they get me, maybe they brainburn me. What the hell, I can laugh at them. I

done my part. Here. I don't have to tell you to be careful where you open this."

He shook my hand and I felt a wad of something adhere to my palm. Then he strolled across the dayroom to the hypnoteleset, punched his clock number for a half-hour trance and slid under, with the rest of the viewers.

I WENT to the washroom and punched my combination for a ten-minute occupancy of a booth—bang went another dime off my pay—and went in. The adhesive wad on my palm opened up into a single sheet of tissue paper which said:

A LIFE IS IN YOUR HANDS

This is Contact Sheet One of the World Conservationist Association, generally known as "the Connies." It has been passed to you by a member of the W.C.A. who judged that you are (a) intelligent; (b) disturbed by the present state of the world; (c) a potentially valuable addition to our ranks. His life is now in your hands. We ask you to read on before you take any action.

Facts About The W.C.A.

The W.C.A. is a secret organization persecuted by all the governments of the world. It believes that reckless exploitation of natural resources has created needless poverty and needless human misery. It believes that continued exploitation will mean the end of human life on Earth. It believes that this trend may be reversed if the people of the Earth can be educated to the point where they will demand planning of population, reforestation, soil-building, de-urbanization and an

end to the wasteful production of gadgets and proprietary foods for which there is no natural demand. This educational program is being carried on by propaganda like this, by demonstrations of force and sabotage of factories which produce trivia.

Falsehoods About The W.C.A.

You have probably heard that "the Connies" are murderers, psychotics and incompetent people who kill and destroy for irrational ends or out of envy. None of this is true. W.C.A. members are humane, balanced persons, many of them successful in the eyes of the world. There are irrational, unbalanced and criminal persons who do commit outrages in the name of conservation, either idealistically or as a shield for looting. The W.C.A. dissociates itself from such people and regards their activities with repugnance.

What Will You Do Next?

That is up to you. You can (a) denounce the person who passed you this contact sheet; (b) destroy this sheet and forget about it; (c) go to the person who passed you the sheet and seek further information.

We ask you to think before you act.

I thought—hard. I thought the broadside was (a) the dullest, lousiest piece of copysmithing I had ever seen in my life; (b) a wildly distorted version of reality; (c) a possible escape route for me out of Chlorella and back to Kathy.

So these were the dreaded Connies! Of all the self-contradictory gibberish—yet it had a certain appeal. The ad was crafted—unconsciously, I was sure—the way we'd do a pharmaceutical booklet for doctors only. Calm, learned, we're all men of sound

judgment and deep scholarship here.

It was an appeal to reason, and that's always dangerous. You can't trust reason. We threw it out of the ad profession long ago and have never missed it.

Well, there were obviously two ways to do it. I could go to the front office and put the finger on Herrera. I'd get a little publicity, maybe; they'd listen to me, maybe; they would certainly believe enough of what I told them to check. I seemed to recall that denouncers of Connies were sometimes brainburned on the sensible grounds that they had been exposed to the virus.

Riskier, but more heroic: I could bore from within, playing along with the Connies. If they were the worldwide net they claimed to be, I might be able to reach Kathy and Fowler Schocken through them—I was smart enough to use them without being used.

THE door of the booth sprang open; my ten minutes were up. I hastily flushed the contact sheet down the drain and went out into the dayroom. Herrera was still in the trance before the set.

Finally he shook himself, blinked and looked around. He saw me and his face was granite. I smiled and nodded, and he came

over. "All right, *companero?*" he asked quietly.

"All right," I said. "Any time you say, Gus."

"Always, after a thing like that, I plug in for some trance. I cannot stand the suspense of waiting to find out. Some day I come up out of trance and find the bulls are beating hell out of me, eh?" He began to sleek the edge of his slicer with the pocket hone.

I looked at it with new understanding. "For the bulls?" I asked.

His face was shocked. "You have the wrong idea a little. For me. So I have no chance to rat."

I hated the twisted minds that had done such a thing to a fine consumer like Gus. It was something like murder. He could have played his part in the world, buying and using and making work and profits for his brothers all around the globe, ever increasing his wants and needs, ever increasing everybody's work and profits in the circle of consumption, raising children to be consumers in turn. It hurt to see him perverted into a sterile zealot.

Surely there must be some sort of remedial treatment for Connies like Gus who were only dupes. It was the people who had soured him on the world who should pay. I would ask—no, it would be better not to. People would jump to conclusions:

"Once a Connie, always a Connie." "Everybody knows that. I don't say Mitch isn't *sound*, mind you, but—"

The hell with Herrera. Anyone who sets out to turn the world upside down has no right to squawk if he gets caught in its gears.

IX

DAYS went by like weeks. Herrera talked little to me, until, one evening in the dayroom, he suddenly asked: "You ever see *Gallina*?" That was Chicken Little. I said no. "Come on down, then. I can get you in. She is something to see."

We walked through corridors and leaped for the descending cargo net. I resolutely shut my eyes. You look straight down that thing and you get the high-sky horrors. Tier Forty, Thirty, Twenty, Ten, Zero, Minus Ten—

"Jump off," Herrera said. "Below Minus Ten is the machinery."

I jumped.

Minus Ten was gloomy and sweated water from its concrete walls. The roof was supported by immense beams. A tangle of pipes jammed the corridor where we got off.

"Nutrient fluid," Herrera explained.

I asked about the apparently immense weight of the ceiling.

"Concrete and lead. It shields cosmic rays. Sometimes a *Gallina* goes cancer." He spat. "No good to eat for people. You got to burn it all if you don't catch it real fast—" He swung his glittering slicer in a screaming arc to show me what he meant by "catch."

He swung open a door. "This is her nest," he said proudly. I looked and gulped.

It was a great concrete dome. Chicken Little filled most of it. She was a gray-brown, rubbery hemisphere towering over and away from us, as huge as a hypno-movie palace. Dozens of pipes ran into her. You could see that she was alive.

Herrera said to me: "All day I walk around her. I see a part growing fast, it looks good and tender, I slice." His two-handed blade shaved off an inch-thick Chicken Little steak. "Crumbs behind me hook it away and cut it up and put it on the conveyor." There were tunnel openings spotted around the circumference of the dome, with idle conveyor belts visible in them.

"Doesn't she grow at night?"

"No. They turn down the nutrient just enough, they let the waste run off. Each night she almost dies. Each morning she comes to life like Santo Lazaro. But nobody ever pray before *pobrecita Gallina*, hey?" He whacked the rubbery thing af-

fectionately with the flat of his slicer.

"You like her," I said inanely.

"Sure. She does tricks for me."

He looked around and then marched the circuit of the nest, peering into each of the tunnel mouths. Then he took a short

beam from one of them and casually braced it against the door to the nest. It fitted against a cross-bar on the door and against a seemingly random groove in the concrete floor. It would do very well as a lock.

"I'll show you the trick." He



took out a sort of whistle. Instead of a mouthpiece, it had an air tank fed by a small hand pump. "They call it Galton's whistle, but who this Galton is, I don't know. Watch — and listen."

He began working the pump,



pointing the whistle purposefully at Chicken Little. I heard no sound, but I shuddered as the rubbery protoplasm bulged away from the pipe in a hemispherical depression.

"Don't be scared, *companero*," he told me. "Just follow." He passed me a flashlight which I stupidly turned on. Pumping hard, Herrera played the soundless blast of the whistle against Chicken Little like a hose. She reacted with a bigger and bigger cavity that finally became an archway over the concrete floor of the nest. Herrera walked into the archway, saying: "Follow." I did, my heart pounding frightfully. He inched forward, pumping the whistle, and the archway became a dome. The entrance into Chicken Little behind us became smaller . . . smaller . . .

We were inside a hemispherical bubble moving slowly through a giant lump of gray-brown, rubbery flesh. "Light on the floor," he said, and I flashed it there. The concrete was marked with lines that looked accidental, but which guided Herrera's feet.

After endless inch-by-inch progress, I flashed my light on a crescent of metal. Herrera piped the bubble over it, and it became a disk. Still pumping, he stamped three times and it flipped open like a manhole. "You first," he said, and I dived down, not know-

ing or caring whether the landing would be hard or soft. It was soft, and I lay there, shuddering. A moment later Herrera landed beside me and the manhole above clapped shut. He stood up, massaging his arm.

"Hard work," he said. "I pump and pump that thing and I don't hear it. Some day it's going to stop working and I won't know the difference until—" He grinned again.

HERRERA introduced me. "This is Ronnie Bowan." He was a short, phlegmatic consumer in a front-office suit. "And this is Arturo Denzer." Denzer was very young and nervous.

The place was a well-lighted little office, all concrete, with air regenerators. There were desks and communication equipment. It was hard to believe that the only way to get in was barred by that mountain of protoplasm above. It was harder to believe that the squeak of inaudibly high-frequency sound waves could goad that insensate hulk into moving aside.

"Pleased to have you with us, Groby," Bowen said. "Herrera says you have brains. We don't go in for a great deal of red tape, but I want your profile."

I gave him Groby's profile and he took it down. His mouth tightened with suspicion as I told him

the low educational level. "You don't talk like an uneducated man."

"You know how some kids are," I said. "I spent my time reading and viewing. It's tough being right in the middle of a family of five. You aren't old enough to be respected and you aren't young enough to be the pet. I felt kind of lost and I kept trying to better myself."

"Fair enough. Now, what can you do?"

"Well, I think I can write a better contact sheet than you use."

"Indeed. What else?"

"Well, propaganda generally. Things to make people feel discontented and wake them up."

"Give me an example."

My brain was chugging nicely. "Start a rumor going around that they've got a way of making new protein and you'll be able to buy it at a dollar a pound. Say it's going to be announced in three days. Then when the three days are up and there's no announcement, start a wisecrack going. Something like that catches on and it'll make them think about the old days favorably."

It was easy. This wasn't the first time I'd turned my talent to backing a product I didn't care for personally.

Bowen was taking it down on a silenced typewriter. "Good," he

said. "We'll try that. Why do you say three days?"

I couldn't very well tell him that three days was the optimum priming period for a closed social circuit to be triggered with a catalytic cue-phrase, which was the book answer. I said instead, with embarrassment: "It seemed about right to me."

"Well, we'll see if it works. Now, Groby, you're going to have a study period. We've got the classic conservationist texts, and you should read them. We've got special publications of interest to us which you should follow: *Statistical Abstracts*, *Journal of Space Flight*, *Biometrika*, *Agricultural Bulletin* and lots more. If you run into tough going, and I expect you will, ask for help. Eventually you should pick a subject to which you're attracted and specialize in it, with an eye to research. An informed conservationist is an effective conservationist."

"Why the *Journal of Space Flight*?" I asked, with a growing excitement. Suddenly there seemed to be an answer: Runstead's sabotage, my kidnaping, the infinite delays and breakdowns in the project. Could the Connies, in their depraved, illogical minds, have decided that space travel was anti-survival, or whatever you called it?

"Very important," said Bowen.

"You need to know all you can about it."

"So we can louse it up?"

"Good God, think what Venus means to us — an unspoiled planet, all the wealth the race needs, all the fields and food and raw materials! Use your head, man!"

"Oh," I said, watching my theory evaporate.

I CURLED up with the reels of *Biometrika* and every once in a while asked for an explanation I didn't need. *Biometrika* was one of the everyday tools of a copy-smith. It holds the story of population changes, IQ changes, death-rate and causes of death and all the rest of it. Almost every issue had good news in it for us — the same news that these Connies clucked over. Increase of population was always good news to us. More people, more sales. Decrease of IQ was always good news to us. Less brains, more sales. But these eccentrically oriented fanatics couldn't see it that way and I had to pretend to go along with them.

I switched to the *Journal of Space Flight* after a while. The news was bad — all bad. There was public apathy, sullen resistance to the shortages that the Venus rocket construction entailed, defeatism about planting a Venus colony at all, doubt that the colony could do anything if

it ever did get planted.

That lousy Runstead!

But the worst news of all was on the cover of the latest issue. The cutline said: "Jack O'Shea Grins as Pretty Friend Congratulates with Kiss after President Awards Medal of Honor." The pretty friend was my wife Kathy.

I got behind the Connie cell then and pushed. In three days there was a kind of bubbling discontent about the chow. In a week the consumers were saying things like: "I wish to hell I was born a hundred years ago . . . I wish to hell this Dorm wasn't so damned crowded . . . I wish to hell I could get out on a piece of land somewhere and work for myself."

The cell was elated. Apparently I had done more in a week than they had done in a year. Bowen — he was stationed in Personnel — told me: "We need a head like yours, Groby. You're not going to sweat your life away as a scum-skimmer. One of these days the assignment boss will ask you if you know nutrient chemistry. Tell him yes. I'll give you a quickie course in everything you need to know."

It happened in another week, when everybody was saying things like: "Be nice to walk in a forest some day. Can y' imagine all those trees they useta have?" and: "This stinking salt-water

soap!" when it had never occurred to them to think of it as "salt-water soap." The assignment boss came up to me and duly said: "Groby, you know any nutrient chemistry?"

"Funny you should ask," I told him. "I've studied it quite a bit. I know the sulfur-phosphorus-carbon-oxygen-hydrogen-nitrogen ratios for chlorella, and I know the optimum temperatures and stuff like that."

Obviously this little was more than he knew. He grunted, "Yeah?" and went away, impressed.

A week later everybody was telling a dirty joke about the Starrzelius Verily trust and I was transferred to an eight-hour job inside the pylon, reading gauges and twisting valves that controlled the nutrient flow to the tanks of chlorella. It was lighter and easier work. I spent my time under Chicken Little — I could pass through her with a Galton whistle almost without cringing — rewriting the Connies' fantastically inept Contact Sheet One:

CAN YOU QUALIFY FOR TOP-LEVEL PROMOTION?

You and *only you* can answer these important questions:

Are you an intelligent, forward-looking man or woman between the ages of 14 and 50—

Do you have the drive and ambition needed to handle the really BIG JOBS tomorrow will bring—

Can you be trusted — *absolutely trusted* — with the biggest, hopeful-est news of our time?

If you can't stand up and shout "YES!" to every one of those questions, please read no further!

But if you can, then you and your friends or family can get in on the ground floor of. . . .

And so on.

Bowen was worried. "You don't think that appeal to upper-level IQs limits it too much, do you?" he asked anxiously.

I didn't tell him that the only difference between that and the standard come-on for Class 12 laborers was that Class 12s got it aurally — they couldn't read. I said I didn't think so.

He nodded. "You're a natural-born copysmith, Groby," he told me solemnly. "In a Conservationist America, you'd be star class."

I was properly modest.

He went on, "I can't hog you; I've got to pass you on to a higher echelon. It isn't right to waste your talents in a cell. I've forwarded a report on you —" he gestured at the communicator — "and I expect you'll be requisitioned. I hate to see you go, but I'm pulling the strings already. Here's the Chlorella Purchaser's Handbook . . ."

My heart bounded. I knew that Chlorella contracted for raw materials in New York City.

"Thanks," I mumbled. "I want to serve wherever I can."

"I know you do, Groby. Uh — one thing before you go. This isn't official, George, but — well, I do a little writing, too. I've got some of my things here — sketches, I guess you'd call them — and I'd appreciate it a lot if you'd take them along and . . ."

I finally got out with the handbook and only fourteen of Bowen's "sketches." They were churlish little scraps of writing, with no sale in them at all that I could see. Bowen assured me he had lots more that he and I could work on.

I hit that handbook hard.

TWISTING valves left me feeling more alive at the end of a day than scum-skimming, and Bowen made sure my Connie labors were as light as possible — to free me for work on his "sketches." The result was that, for the first time, I had leisure to explore. Herrera took me into town with him once, and I discovered what he did with those unmentioned weekends. The knowledge shocked and yet did not disgust me. If anything, it reminded me that the gap between the executive and consumer could not be bridged by anything as abstract and unreal as "friendship."

Stepping out of the old-fashioned pneumatic tube into a Costa Rican drizzle, we stopped

at a third-rate restaurant for a meal.

Herrera insisted on getting us each a potato and being allowed to pay for it — “No, call it a celebration. You let me go on living after I gave you the contact sheet, no? So we celebrate.”

He was brilliant through the meal, a fountain of conversation and bilingual badinage with me and the waiters. The sparkle in his eye, the rapid, compulsive flow of speech, the easy, unnecessary laughter were like nothing so much as the gaiety of a young man on a date. I remembered my first meeting with Kathy, that long afternoon at Central Park, strolling hand in hand down the dim-lit corridors, the dance hall, the eternal hour we stood outside her door . . .

Herrera reached over and pounded me on the shoulder, and I saw that he and the waiter were laughing. I laughed, too, defensively, and their laughter doubled; evidently the joke had been on me.

“Never mind,” said Herrera, sobering; “we go now. You will like what I have for us to do in back, I think.”

He paid the check and we threaded our way between the counters, the waiter leading the way. He opened a door and hissed something rapid in Spanish to Herrera.

“Oh, don’t worry,” Herrera told him. “We will not be long.”

“In back” turned out to be—a library.

I was conscious of Herrera’s eyes on me, and I don’t think I showed any of what I felt. I even stayed with him for an hour or so, while he devoured a wormy copy of something called *Moby Dick* and I glanced through half a dozen ancient magazines. Some of those remembered classics went a long way toward easing my conscience — there was actually an early “Do You Make These Common Mistakes in English?” and a “Not a Cough in a Carload” that would have looked fine on the wall of my office, back in Schocken Tower. But I could not relax in the presence of so many books without a word of advertising in any of them. I am not a prude about solitary pleasures when they serve a useful purpose, but my tolerance has limits.

Herrera knew, I think, that I lied when I told him I had a headache.

Much later, he came stumbling into the Dorm and I turned my head away. We scarcely spoke after that.

A week later, after a near-riot sparked by a rumor that the yeast fritters were adulterated with sawdust, I was summoned to the front office.

A veep for Personnel saw me after I had waited an hour. "Groby?"

"Yes, Mr. Milo."

"Remarkable record you've made. Quite remarkable. I see your efficiency rating is straight fours."

That was Bowen's work. He kept records. He had taken five years to worm himself into that very spot. "Thank you, Mr. Milo."

"Welcome, I'm sure. We, uh, happen to have a vacancy approaching. One of our people up North. I see his work is falling off badly."

Not his work — the ghost of his work, the shadow on paper carefully outlined and filled in by Bowen. I began to appreciate the disproportionate power that Connies could wield.

"Do you happen to have any interest in purchasing, Groby?"

"Strange that you sensed it, Mr. Milo," I said evenly. "I've always had a feel for purchasing. Read everything I could find on the subject."

He began firing questions and I respectfully regurgitated answers from the *Chlorella* manual. He had memorized it twenty-odd years ago and I had memorized it only a week ago, so he was no match for me. After an hour he was convinced that George Groby was the very man needed

for *Chlorella* Protein.

That night I told the cell about it.

"It means New York," Bowen said positively. I couldn't keep back a great sigh. Kathy!

He went on unaware: "I've got to issue you some — equipment. Look into my mouth."

I peered in. Good fillings, a passable bridge and nothing else as far as I could see. I told him so.

Bowen grinned. "By popping my lower jaw out and biting down hard, I can kill myself in a fifth of a second. One of those fillings is a shell that contains pure nicotine. You're going to get one like it."

"The hell I am!" I started to say, and then shut up. The game was risky enough.

"Our records," he said, taking a kit from a desk drawer, "contain only a single case of the filling being accidentally perforated. It never could happen again in a million years. You have nothing to worry about. Open your mouth, please."

I opened.

"Bite, please."

I bit.

"There!"

"Done?" I muttered, curiously reluctant to close my mouth.

"All done," he said. "Let me see you bite. Harder . . . harder . . . *harder*. That's it!" He touched

a molar with a tweezer. "That's the one. You just bite down on it if captured. And for God's sake, have one of us remove it temporarily before you go to the dentist."

"I'll do that," I said faintly.

"Now," he said, "the recognition signals."

There was a hand sign for short range, a grand hailing sign of distress for medium range. For long range there was a newspaper-ad code; quite a good one. He made me practice the signs and memorize the code until the small hours of the morning. When we left through Chicken Little, I realized that I hadn't seen Herrera all day. I asked as we emerged what had happened.

"He broke," Bowen said bluntly.

I didn't say anything. A kind of shorthand talk among Connies, it meant: "Herrera toiled for years and years in the cause of the W. C. A. He gave up his nickels and dimes and the few pleasures they could buy him. He didn't marry and he didn't sleep with women because it would have imperiled security. He became possessed by doubts so secret that he didn't admit them to himself or us. The doubts and fears mounted. He was torn too many ways and he died."

"Don't brood about it," Bowen said. "You're going North.

You've got a job to do."

I did. A big job.

X

I WENT to New York City almost respectably, in a cheap front-office suit, aboard a tourist rocket, steerage class. Above me the respectable Costa Rican consumers oohed and ahed at the view from the prism windows or anxiously counted their few bills, wondering how far they'd go in the pleasures for sale by the colossus of the North.

Below decks we were a shabbier, tougher gang, yet it was no labor freighter. We had no windows, but we had lights and vending machines and buckets.

A plant protection man had made a little speech to us before we loaded: "You crumbs are going North, out of Costa Rican jurisdiction. You're going to better jobs. But don't forget that they are jobs. You're in hock to Chlorella, and Chlorella's claim on you is a prior lien. If any of you think you can disappear or break your contract, you're going to find out just how fast extradition for a commercial offense can be. Is everything clear?" Everything was clear. "All right, crumbs. Get aboard and give my regards to upper Broadway."

We slid into a landing at Montauk without incident. Down be-

low, we sat and waited while the consumers on tourist deck filed out, carrying their baggage kits. Then we sat and waited while Food Customs inspectors, wearing the red-and-white A & P armbands, argued vociferously with our stewards over the surplus rations — one man had died on the trip, and the stewards, of course, held out his Chicken Little cutlets to sell in the open market.

Finally the order came to fall out in fifties. We lined up and had our wrists stamped with our entry permits, marched by squads to the subway, and entrained for the city. I had a bit of luck — my group drew a freight compartment.

At the Labor Exchange we were sorted out and tagged for our respective assignments. There was a bit of a scare when it came out that Chlorella had sold the contracts on twenty of us to I. G. Farben — nobody wants to work in the uranium mines — but I wasn't worried.

The man next to me stared moodily as the guards cut out the unlucky twenty and herded them off. "It's a crime. Don't you think so, Mac? It violates the essential dignity of labor, what I call."

I gave him an angry glare. The man was a Connie, pure and simple. Then I remembered that

I was a Connie, too, for the time being. I considered the use of the handclasp and decided against it. He would be worth remembering if I needed help; but if I revealed myself prematurely, he might call on me.

We moved on to the Chlorella depot in Nyack suburbs.

WASTE not, want not. Under New York, as under every city in the world, the sewage drains led to a series of settling basins and traps. Every citizen knows how the organic waste of twenty-three million persons came waterborne through the venous tracery of the city's drains; how the salts were neutralized through ion-exchange, the chemically rich liquid piped to the kelp farms in Long Island Sound, the sludge that remained pumped into tank barges for shipment to Chlorella. I knew about it, but I had never seen or smelled it.

My title was Procurement Expeditor, Class Nine. My job was coupling the flexible hoses that handled the sludge. After the first day, I shot a week's pay of soot-extractor plugs for my nostrils; they didn't filter out all the odor, but they made it possible to live in it.

On the third day I came off the shift and hit the showers. I had figured it out in advance: After six hours at the tanks

where there were no vending machines for the simple reason that no one could conceivably eat, drink or smoke *anything* in that atmosphere, the pent-up cravings of the crew kept them on the Popsie-Crunchie-Starrs cycle for half an hour before the first man even thought of a shower.

By sternly repressing the craving, weaker in me than in most because it had had less time to become established, I managed to have the showers almost alone. When the mob arrived, I hit the vending machines. It was a simple application of intelligence, and if that doesn't bear out the essential difference between consumer and star class mentality, what does? Of course, as I say, the habits weren't as strong in me.

There was one other man in the shower, but, with only two of us, we hardly touched. He handed me the soap as I came in; I lathered and let the water roar down over me under the full pressure of the recirculators. I was hardly aware he was there.

As I passed the soap back to him, though, I felt his third finger touch my wrist, the index finger circle around the base of my thumb.

"Oh," I said stupidly, and returned the handclasp. "Are you my contact—"

"Ssh!" He gestured at the Mu-

zak spy-mike dangling from the ceiling. He turned his back on me and meticulously soaped himself again.

When he returned the soap, a scrap of paper clung to it. In the locker room I squeezed it dry, spread it out. It read: "Tonight is pass night. Go to the Metropolitan Museum of Art, Classics Room. Be in front of the Maiden-form Exhibit at exactly five minutes before closing time."

I joined the queue at the supervisor's desk as soon as I was dressed. In less than half an hour, I had a stamped pass authorizing me to skip bedcheck for the night. I caught the shuttle down to Bronxville, transferred to a north-bound local, rode one station, switched to the south-bound side and got out at Schocken Tower. No one appeared to be following me. I hadn't expected anyone to, but it never pays to take chances.

My Connie rendezvous at the Met was almost four hours off. I stood around in the lobby until a cop, contemptuously eying my cheap clothing, moved toward me. I had hoped Hester or perhaps even Fowler Schocken himself might come through. No such luck. I saw a good many faces I recognized, of course, but none I was sure I could trust. And, until I found out what lay behind the double cross on Starr-

zelius Glacier, I had no intention of telling just anybody that I was still alive.

The Pinkerton said, "You want to give the Schocken people your business, crumb? You got a big account for them, maybe?"

"Sorry," I said, and headed for the street door. It didn't figure that he would bother to follow me through the crowd in the lobby; he didn't.

I dodged around the recreation room, where a group of consumers were watching a PregNot love story on the screen and getting their samples of Coffiest, and ducked into the service elevators.

"Eightieth," I said to the operator, and at once realized I had blundered.

The operator's voice said sharply through the speaker grille: "Service elevators go only to the seventieth floor, you in Car Five. What do you want?"

"Messenger," I lied miserably. "I got to make a pickup from Mr. Schocken's office. I *told* them I wouldn't be let into Mr. Schocken's office, a fellow like me. I told them, 'Look, he's probably got twenny-five seckataries I got to go through before they let me see him.' I said—"

"The mail room is on forty-five," the operator said, a shade less sharply. "Stand in front of the door so I can see you."

I moved into range of the TV

ike. I had never been in the elevator operators' room, a thousand feet below me, where they pushed the buttons that triggered the relays that sent the cars up and down the toothed shafts; but I would have given a year's pay to have been able to look into it then.

I stood there for half a minute. Then the operator's voice said noncommittally. "All right, you. Back in the car. Forty-fifth floor, first slide to the left."

The others in the car stared at me through an incurious haze of Coffiest's alkaloids until I got out. I stepped on the leftbound slidewalk and went past the door marked "Mail Room" to the corridor juncture where my slide-walk dipped down around its roller. It took me a little while to find the stairway, but that was all right. I needed the time to catch up on my swearing. I didn't dare use the elevators again.

Have you ever climbed thirty-five flights of stairs?

I SKULKED along the corridors in executive country, very conscious of the fact that the first person who paid any attention to me would either recognize me or throw me out. Only clerks were in the corridors, and none I'd known at all well; my luck was running strong.

But not strong enough. Fowler Schocken's office was locked.

I ducked into the office of his secretary 3, which was deserted, and thought things over. Fowler usually played a few holes of golf at the country club after work. It was pretty late for him still to be there, but I thought I might as well take the chance—though it was four more flights to the club.

I made it standing up. The country club was a handsome layout, which was only fair because the dues were handsome,

too. Besides the golf links, the tennis court and other sports facilities, the whole north end of the room was woods — more than a dozen beautifully simulated trees — and at least twenty recreation booths for reading, watching movies or any other spectator pleasure.



A mixed foursome was playing golf. I moved close to their seats as unobtrusively as possible. They were intent on their dials and buttons, guiding their players along the twelfth hole fairway. I read their scores from the telltale with a sinking heart; all were in the high nineties. Duffers. Fowler Schocken averaged under eighty for the course and couldn't be in a group like that. As I came close, I saw that both the men were strangers to me.

I hesitated before retreating, trying to decide what to do next.



Schocken wasn't in sight anywhere in the club. Conceivably he was in one of the recreation booths, but I could scarcely dare open the doors of all of them to see.

One of the girls had just sunk a four-inch putt to finish the hole. Smiling happily as the others complimented her, she leaned forward to pull the lever that brought the puppet players back to the tee and changed the layout to the dogleg of the thirteenth hole, and I caught a glimpse of her face. It was Hester, my secretary.

I couldn't guess how Hester came to be in the country club, but I knew everything else there was to know about Hester. I retreated to an alcove near the entrance to the ladies' room. It was only about ten minutes wait before Hester showed up.

She fainted, of course.

SWEARING, I carried her into the alcove. There was a couch; I put her on it. There was a door; I closed it.

She blinked up at me as consciousness came back. "Mitch," she choked. "You can't be. You're dead."

"I am not dead," I told her. "Somebody else died and they switched bodies. I don't know who 'they' are. Yes, it's really me. Mitch Courtenay, your boss.

I can prove it. For instance, remember last year's Christmas party, when you were so worried about—"

"Never mind," she said hastily. "My God, Mitch — I mean Mr. Courtenay—"

"Mitch is good enough. I'm alive, all right, but I'm in a kind of peculiar mess. I've got to get in touch with Fowler Schocken. Can you fix it right away?"

She swallowed and reached for a cigarette. Recovering, I automatically took out a Starr.

"Mr. Schocken's on the Moon. It's a big secret, but I guess I can tell you. It's something to do with the Venus project. After you got killed — well, you know what I mean — after that, when he put Mr. Runstead on the project and it began to slip, he decided to take matters into his own hands. I gave him all your notes. One of them said something about the Moon, I guess. Anyway, he took off a couple of days ago."

"Who'd he leave in charge here? Harvey Bruner? Can you reach—"

Hester was shaking her head. "Mr. Schocken switched in such a hurry, there wasn't anyone to spare to take over his job except Mr. Runstead. But I can call him right away."

"No!" I looked at my watch and groaned. I would have just about time to make it to the Met.

"I've got to leave. Don't say anything to *anybody*, will you? I'll figure something out and call you. Let's see, when I call I'll say I'm — what's the name of that doctor of your mother's? — Dr. Gallant. And I'll arrange to meet you and tell you what we're going to do. I can count on you, Hester, can't I?"

"Sure, Mitch," she said breathlessly.

"Fine. Now you'll have to convey me down in the elevator. I haven't got time to walk and there'll be trouble if a guy like me gets caught on the club floor." I stopped and looked her over. "Speaking of which, what in the world are you doing here?"

Hester blushed. "After you were gone, there weren't any other secretarial jobs. The rest of the executives had their girls and I just couldn't be a consumer again, Mitch, not with the bills and all. And — well, there was this opening up here, you see."

I hope nothing showed on my face; God knows I tried. Damn you to hell, Runstead, I said to myself, thinking of Hester's mother and Hester's young man that she'd maybe been going to marry some day, and a man like Runstead wrecking executives' lives like mine and staff lives like Hester's and dragging them down to the level of consumers.

"Don't worry, Hester," I said

gently. "I'll make everything up to you."

I knew how to do it, too. Quite a lot of the girls on the ZZ contract managed to avoid the automatic renewal and downgrading. It would cost a lot for me to buy out her contract before the year was up, so that was out of the question; but some of the girls did pretty well with single executives after their first year. And I was important enough so that if I made a suggestion to some branch head or bureau chief, he would not be likely to ignore it, or even to treat her badly.

I don't approve of sentiment in business matters, but this was a special situation.

HESTER insisted on loaning me some money, so I made it to the Met with time to spare by taking a pedicab. Even though I had paid the driver in advance, he could not refrain from making a nasty comment about high-living consumers as I got out.

I have always had a fondness for the Met. I don't go for religion — partly, I suppose, because it's a Taunton account — but there is a grave, ennobling air about the grand old masterpieces in the Met that gives me a feeling of peace and reverence. I spent my few spare minutes

standing silently before the bust of G. Washington Hill, and I felt more self-assured than I had since that first afternoon at the South Pole.

At precisely five minutes before midnight, I was standing before the big, late-period Maidenform—number 35 in the catalogue: "I Dreamed I went Ice-Fishing in My Maidenform Bra"—when I became conscious of someone whistling in the corridor behind me. The notes were irrelevant; the cadence formed one of the recognition signals I'd learned in the cell room under Chicken Little.

One of the guards was strolling away. She looked over her shoulder at me and smiled.

To all external appearances, it was a casual pickup. We linked arms, and I felt the coded pressure of her fingers on my wrist: D-O-N-T T-A-L-K W-H-E-N I L-E-A-V-E Y-O-U G-O T-O T-H-E B-A-C-K O-F T-H-E R-O-O-M S-I-T D-O-W-N A-N-D W-A-I-T

I nodded. She took me to a plastic-finished door, pushed it open, pointed inside. I went in alone.

There were ten or fifteen consumers sitting in straight-back chairs, facing an elderly consumer with a lectorial goatee. I found a seat in the back of the room and sat in it. No one paid any particular attention to me.

The lecturer was covering the high spots of some particularly boring pre-commercial period. I listened with half my mind, trying to catch some point of similarity in the varying types around me. All were Connies, I was reasonably sure — else why would I be here? But the basic stigmata, the surface mark of the lurking fanatic inside that should have been apparent, escaped me. They were all consumers, with the pinched look that soyaburgers and Yeasties inevitably give; but I could have passed any of them in the street without a second glance. Yet this was New York, and Bowen had spoken of it as though the Connies I'd meet here were pretty high up in the scale.

That was a consideration, too. When I got out of this mess — when I got through to Fowler Schocken and cleared my status — I might be in a position to break up this whole filthy conspiracy. I looked over the persons in the room a little more attentively, memorizing their features. I didn't want to fail to recognize them, next time we came in contact.

There must have been some sort of signal, but I missed it. The lecturer stopped almost in mid-sentence, and a plump little man in a goatee from the first row stood up.

"All right," he said in an ordinary tone, "we're all present and there's no sense wasting any more time. We're against waste; that's why we're here. For the purpose of this meeting, we'll use numbers. You can call me 'One,' you 'Two'—" he pointed to the man in the next seat—"and so on by rows to the back of the room. All clear?"

"Now listen closely. This is world operational headquarters, right here in New York; you can't go any higher. Each of you was picked for some special quality—you know what they are. You'll all get assignments tonight. But before you do, I want to point out one thing. You don't know me and I don't know you; every one of you got a big buildup from your last cells, but sometimes the men in the field get a little too enthusiastic. If they were wrong about you . . . Well, you understand these things, eh?"

There was a general nod. I nodded, too, but I paid particular attention to memorizing that little goatee. One by one, numbers were called, and the newjohns got up, conferred briefly with the goatee, and left, in couples and threes, for unannounced destinations. I was almost the last to be called. Only a very young girl with orange hair and a cast in her eye was still in the room.

"Okay, you two," said the man

with the goatee. "You are going to be a team, so you might as well know names. Groby, meet Corwin. Groby's a kind of copy-smith. Celia's an artist."

"Right," she said, lighting a Starr. A perfect consumer type, if only she hadn't been corrupted by these zealots; I noticed her jaws working on Hi-Kick Gum even while she smoked.

"We'll get along fine," I said approvingly.

"You sure will," said the man in the goatee. "You have to. In order to give you a chance to show what you can do, we'll have to let you know a lot of stuff that we don't want to read in the morning paper. If you don't work out for us, you see the fix we'll be in." He tapped a little bottle of colorless fluid on the desk top. The tinny rattle of the aluminum top was no tinnier than my voice as I said, "Yes, sir," because I knew what little bottles of colorless fluid could be assumed to contain.

It turned out, though, that it wasn't much of a problem. I spent three difficult hours in that little room, then pointed out that if I didn't get back to barracks I would miss the morning work call and there would be hell to pay. So they excused me.

But I missed work call anyhow. I came out of the Museum into a perfect spring dawn, feel-

ing, all in all, pretty content with life. A figure loomed out of the smog and peered into my face. I recognized the sneering face of the solo taxi-pusher who had brought me to the Museum. He said briskly, "Hel-lo, Mr. Courtenay," and then the obelisk from behind the Museum, or something very much like it, smacked me across the back of the neck.

XI

"IS he ready for Hedy?" I heard somebody say.

"Good God, no!"

"I was only asking."

"You ought to know better. First you give the amphetamine, plasma, maybe a niacin megawatt. Then they're ready for Hedy. She doesn't like it if they keep blacking out. She sulks."

Nervous laugh with a chill in it.

I opened my eyes and felt secure and grateful. For what I could see was a cerebral-gray ceiling, the shade you find only in the brain room of an advertising agency. I was safe in the arms of Fowler Schocken Associates—or was I? I didn't recognize the face that leaned over me.

"Why so pleased?" the face inquired nastily. "Don't you know where you are?"

After that it was easy to guess. "Taunton's?" I croaked.

"That is correct."

I tried my arms and legs and found they didn't respond. I couldn't tell whether it was drugs or a plasticocoon. "Look," I said steadily, "I don't know what you people think you're doing, but I advise you to stop it. Apparently this is a kidnaping for business purposes. You people are either going to let me go or kill me. If you kill me without a declaration, you'll get the *cerebrin*, so of course you're going to let me go eventually. I suggest you do it now."

"Kill you, Courtenay?" asked the face with mocking wonder. "How would we do that? You're dead already. Everybody knows that. You died on Starrzelius Glacier; don't you remember?"

I struggled again, without results. "They'll brainburn you," I said. "Are you people crazy? Who wants to be brainburned?"

The face said nonchalantly: "You'd be surprised." And in an aside to somebody else: "Tell Hedy he'll be ready soon." Hands did something, there was a click, and I was helped to sit up. The skin-tight pulling at my joints showed it was a plasticocoon, which meant I might as well save my strength.

A buzzer buzzed and I was told sharply: "Keep a respectful tongue in your head, Courtenay. Mr. Taunton's coming in."

B. J. Taunton lurched in. He looked just the way I had always seen him from afar at the speaker's tables in hundreds of banquets: florid, gross, overdressed and drunk.

He surveyed me, feet planted wide apart, swaying just a little. "Courtenay," he said. "Too bad. You might have turned out to be something if you hadn't cast your lot with that swindler Schocken. Too bad."

He was drunk, he was a disgrace to the profession, but I couldn't keep my respect for an entrepreneur out of my voice. "Sir," I said, "there must be some misunderstanding. There's been no provocation of Taunton Associates to commit commercial murder — has there?"

"Not what the law considers provocation. All Schocken did was steal my groundwork, take over my senators, suborn my committee witnesses and *steal Venus from me!*" His voice rose.

"No, no provocation. He's carefully refrained from killing any of my people. Shrewd Schocken; ethical Schocken!"

His glassy eyes glared at me. "Of all the low-down, lousy, unethical, cheap-jack stunts ever pulled on me, yours was the rottenest." He thumped his chest, briefly threatening his balance. "I figured out a way to commit a safe commercial murder and

you played possum like a scared rat. You ran like a rabbit, you dog."

"Sir," I said desperately, "I don't know what you're driving at." His years of boozing, I thought, had finally caught up with him. No sober ad man could have mixed his similes so unconsciously.

He sat down; one of his men darted in and there was a chair seat to meet his broad rump in the nick of time. With an expansive gesture, B. J. Taunton said to me: "Courtenay, I am essentially an artist."

The words popped out of me automatically: "Of course, Mr. —" I almost said "Schocken." It was a well-conditioned reflex. "Of course, Mr. Taunton."

"A dreamer of dreams; a weaver of visions." I seemed to see Fowler Schocken sitting there instead of his rival, the man who stood against everything that Fowler Schocken stood for. "I wanted Venus, Courtenay, and I shall have it. No rocket under Schocken's management is ever going to get off the ground, if I have to corrupt every one of his underlings and kill every one of his section heads. For I am essentially an artist."

"Mr. Taunton," I said steadily, "you can't kill section heads as casually as all that. You can't find anybody who'll take the risk

for you. Nobody wants to be brainburned."

"I got a mechanic to drop that 'copter pod on you, didn't I? I got an unemployable bum to plug you through your apartment window, didn't I? Unfortunately, both missed. And then you crossed us up with that cowardly run-out on the glacier."

I didn't say anything. The run-out on the glacier had been no idea of mine. God only knew whose idea it had been to have Runstead club me, shanghai me and leave a substitute corpse in my place.

"Tools in my hands," Taunton brooded. "The greatness of an artist is in his simplicity, his lack of confusion, Courtenay. You say to me: 'Nobody wants to be brainburned.' I say: '*Find* somebody who wants to be brainburned and *use* him.'"

"*Wants* to be brainburned?" I repeated stupidly.

"*Explain*," said Taunton to someone alongside him. "I want him thoroughly convinced."

One of his men told me dryly: "It's a matter of psychological need, Courtenay. Ever hear of masochists?"

"Sure," I said as nastily as I could. "Consumers who prefer Taunton products."

"Worse than that . . . people with a deep need for physical and mental punishment. In some

cases, people with so great a feeling of guilt — and it doesn't matter to us whether the feeling is realistic or not — that only an agonizing death can wipe it out. Do you understand now?"

I did, and it frightened me. "Flagellants," I whispered. "Self-immolation. But I thought that with our psychiatric methods—"

"Most of them are detected, treated or isolated, Courtenay. But not all. Our matchless research facilities here at Taunton have unearthed several. They are eager would-be suicides, only the suicides they would inflict on themselves aren't sufficiently painful. They want the exquisite agony of *cerebrin*. You offer that to them. Simple, isn't it?"

Yes, simple . . . and as sinister as anything one could expect from Taunton. I knew from my research that there were consumers who defied all the principles of sales psychology. There was Malone, who quietly dug tunnels for six years and one Sunday morning blew up all of Red Bank, New Jersey, because a Burns traffic cop had gotten him sore. Conversely, we had James Revere, hero of the *White Cloud* disaster, a shy, frail tourist-class steward who had returned again and again to the flames until he rescued 76 passengers, and died because his flesh had been burned from his

bones. And there were others who seemingly sought destruction, against every instinct we built our great profession on — self-preservation, self-advancement, gratification of the pleasure principle. It had never made sense, so we had dismissed these cases as exceptions that proved our rules.

Taunton was an artist. He hadn't dismissed these cases; he'd worked out a use for them. It meant I was as good as dead. I'd never get back to the Venus project. I'd never see Kathy again.

TAUNTON'S blurry voice broke in: "You grasp the pattern? The big picture? The essential theme of it is that I'm going to repossess Venus. Now, beginning at the beginning, tell us about the Schocken Agency. All its little secrets, its little weaknesses, its ins and outs, its corruptible employees, its appropriations, its Washington contacts —"

I was a dead man with nothing to lose. "No," I said.

One of Taunton's men said abruptly, "He's ready for Hedy," got up and went out.

"You've studied pre-history, Courtenay," Taunton pointed out. "You may recognize the name of Giles de Rais." I did, and felt a tightness over my scalp, like a steel helmet slowly shrinking. "All the generations of

pre-history produced only one Giles de Rais. Nowadays we have our pick of several. Out of all the people I might have chosen to handle special work like that for me, I took Hedy. You'll see why."

The door opened and a pale, adenoidal girl with lank blonde hair was standing in it. She had a silly grin on her face; her lips were thin and bloodless. In one hand she held a six-inch needle set in a plastic handle.

I looked into her eyes and began screaming. I couldn't stop until they led her away and closed the door again.

I was broken.

Taunton leaned back comfortably and said: "Give."

I tried, but I couldn't. My voice wouldn't work right and I couldn't remember whether my firm was Fowler Schocken or Schocken Fowler.

Taunton got up at last. "We'll put you on ice for a while, Courtenay, so you can pull yourself together. I need a drink myself." He shuddered involuntarily and then beamed again. "Sleep on it," he said, and left with a slight stagger.

Two of his men carted me from the brain room, down a corridor and into a bare cubbyhole with a very solid door. It seemed to be night in executives' country. Nothing was going on in any of the offices we passed, lights were

low and a corridor guard was yawning at his desk.

I asked unsteadily: "Will you take the cocoon off me? I'm going to be a mess if I don't get out of it."

"No orders," one of them said, and they slammed the solid door and locked it.

I flopped around the small floor, trying to find something sharp enough to break the film and give me an even chance of bursting the plastic, but there was nothing. After incredible contortions and a dozen jarring falls, I found that I could never get to my feet. The doorknob had offered a very faint ghost of hope, but it might as well have been a million miles away.

Mitchell Courtenay, star class copysmith. Mitchell Courtenay, key man of the Venus Section. Mitchell Courtenay, destroyer-to-be of the Connies. Mitchell Courtenay flopping on the floor of a cell in the offices of the sleaziest, crookedest agency that ever blemished the profession, without any prospect except betrayal and — with luck — a merciful death. Kathy at least would never know. She would think I had died like a fool on the glacier, meddling with the power pack when I had no business to . . .

The lock on the door rattled. They were coming for me. But when the door opened, I saw

from the floor a single pair of matchstick ankles, nylon-clad.

"I love you," said the strange, dead voice of a woman. "They said I would have to wait, but I couldn't." It was Hedy. She had her needle.

I tried to cry for help, but my throat was paralyzed as she knelt beside me with shining eyes. The temperature of the room seemed to drop ten degrees. She clamped her bloodless lips on mine; they were like heated iron. And then the left side of my face and head were being torn off. It lasted for seconds and blended into a red haze and unconsciousness.

"Wake up," the dead voice was saying. "I want you. Wake up." Lightning smashed at my right elbow and I cried out and jerked my arm. My arm moved—

It moved!

The bloodless lips descended on mine again, and again her needle ran into my jaw, probing exactly for the great lump of the trigeminal facial nerve, and finding it. I fought the red haze that was trying to swallow me up. My arm had moved — she had perforated the membrane of the cocoon and it could be burst. The needle searched again and somehow the pain was channeled to my right arm. In one convulsive jerk it was free.

I think I took the back of her neck in my hand and squeezed. I

am not sure. I do not want to be sure. But after five minutes she and her love for me did not matter. I ripped the plastic from me and got to my feet an inch at a time, moaning with stiffness.

The corridor guard could not matter any more. If he had not come at my cries, he would never. I walked from the room and saw the guard apparently sleeping face-down on his desk. As I stood over him, I noticed a very little blood coagulating in the small valley between the two cords of his shrunken old neck. One thrust from Hedy transfixing the medulla had been enough. I could testify that her knowledge of the nervous system's topography was complete.

The guard wore a gun that I hesitated over for a moment and then rejected. In his pockets were a few dollars that would be more useful. I hurried on to the ladders. His desk clock said 0605.

I KNEW already about climbing upstairs. I learned then about climbing downstairs. If your heart's in good shape, there's little to choose between them. It took me an estimated thirty minutes in my condition to get from executives' country onto the populated stairs below.

The first sullen stirrings of the work-bound consumers were well under way. I passed half a dozen

bitter fist-fights and one knife battle. The Taunton Building nightdwellers were a low, dirty lot who never would have been allowed stairspace in the Schocken Tower, but it was all to the good. I attracted no attention whatsoever in my filthy clothes and sporting a fresh stab wound in my face. Some of the bachelor girls whistled — pure reflex, of course—but that was all.

My timing was good. I left the building lobby in the very core of a cheek-by-jowl mob boiling out the door to the shuttle which would take them to their wretched jobs. I thought I saw men in plainclothes searching the mob from second-floor windows, but I didn't look up before I got into the shuttle station.

At the change booth, I broke all my bills and went into the washroom. "Split a shower, bud?" a shabby woman asked me. I wanted one badly and by myself, but I didn't dare betray any white-collar traits. She and I pooled our coins for a five-minute salt, thirty-second fresh, with soap. I found that I was scrubbing my right hand over and over again. I found that when the cold water hit the left side of my face, the pain was dizzying.

After the shower, I wedged myself into the shuttle and spent two hours zigzagging under the city. My last stop was Times

Square, which now was mostly a freight area. While cursing consumers hurled crates of protein ticketed for various parts of town onto the belts, I tried to phone Kathy. There was nobody home.

I got Hester at the Schocken Tower and told her: "I want you to raise every cent you can, borrow, clean out your savings, and buy a Starrzelius apparel outfit for me. Meet me with it soonest at the place where your mother broke her leg two years ago. The exact place, remember?"

"Yes, naturally. But my contract—"

"Don't make me beg you, Hester. Trust me. For God's sake, hurry. And if you get here and I'm in the hands of the guards, don't recognize me."

I hung up and slumped in the phone booth until the next party hammered indignantly on the door. I walked slowly around the station, had Coffiest and a cheese sandwich and rented a morning paper at the newsstand. The story about me was a bored little item on page three: SOUGHT FOR CB & FEMICIDE. It said George Groby had failed to return from pass to his job with Chlorella and had used his free time to burglarize executives' country in the Taunton Building. He had killed a secretary who stumbled on him and made his escape.

Hester met me half an hour later near the loading chute from which a crate had once whizzed and broken her mother's leg. She looked terrified; technically, she was as guilty of contract breach as "George Groby."

I took the garment box from her and asked: "Do you have fifteen hundred dollars left?"

"Just about. My mother was frantic—"

"Get us reservations on the next Moon ship; today if possible. Meet me back here. I'll be wearing the new clothes."

"Us? The Moon?" she squeaked.

"Yes, us. I've got to get off Earth before I'm killed. This time it'll be for keeps."

XII

IN ten hours, we were groaning side by side under the takeoff acceleration of the Moonship *David Ricardo*. She had cold-bloodedly passed herself off as a Schocken employee on special detail to the Moon and me as Groby, Sales Analyst 6. Naturally the dragnet for Groby, Expediter 9, had not included the Astoria spaceport. Sewage workers on the lam from CB and Femicide wouldn't hop a rocket, of course.

We rated a compartment and the max ration. The *David Ri-*

cardo was so constructed that most passengers rated them. It wasn't a trip for the idly curious or the consumer fifteen-sixteenths of the population. The Moon was strictly business—mining—and a very little sight-seeing. Our fellow passengers, what we saw of them at the ramp, were preoccupied engineers, a few laborers in the small steerage, and silly-rich men and women who wanted to say they'd been there.

After takeoff, Hester was hysterically gay for a while, and then snapped. She sobbed on my shoulder, frightened at the enormity of what she'd done. She'd been brought up in a deeply moral Sales-respecting home; you couldn't expect her to break a labor contract without an emotional lashback.

"Mr. Courtenay — Mitch — if only I could be sure it was all right! I know you've always been good to me and I know you wouldn't do anything wrong, but I'm so scared and miserable!"

"You be the judge, Hester. Taunton has found out that there are people who are willing to commit unprovoked commercial murder so they can be given *cerebrin*. He thinks Mr. Schocken grabbed the Venus project from him. He's tried twice at least to kill me. I *thought* for a while Mr. Runstead was one of his agents, assigned to wreck Schock-

en's handling of the Venus account. Now, I don't know. Mr. Runstead clubbed me when I went after him at the South Pole, spirited me away to a labro freighter under a faked identity and left a substitute body for mine.

"And," I added cautiously, "there are Connies involved in it."

She uttered a small shriek.

"I don't know how they dove-tail," I said. "But I was in a Connie cell—"

"Mister Courtenay!"

"Strictly as a blind," I hastily explained. "I was stuck in Chlor-ella Costa Rica and the only way north seemed to be through the Connie network. They had a cell in the factory, I joined up, turned on the talent, and got transferred to New York. The rest you know."

She paused for a long time and asked: "Are you sure it's all right?"

Wishing desperately that it were, I firmly said: "Of course, Hester."

She gave me a game smile. "I'll get our rations," she said, unsnapping herself. "You'd better stay here."

FORTY hours out, I snarled at Hester: "The blasted black-marketing steward is going too far! Look at this!" I held up my

bulb of water and my ration box. The seal was clearly tampered with on both containers, and visibly there was water missing. "Max rations are supposed to be tamper-proof, but this is plain burglary. How do yours look?"

"Same," she said listlessly. "You can't do anything about it. Let's not eat just yet, Mr. Courtenay." She made a marked effort to be vivacious. "Tennis, anyone?"

"All right," I grumbled, and set up the field, borrowed from the ship recreation closet.

She was better at tennis than I, but I took her in straight sets. Her coordination was way off. She'd stab for a right forecourt deep crosscourt return and like as not miss the button entirely—if she didn't send the ball into the net by failing to surge power with her left hand on the rheostat. A half hour of the exercise seemed to do both of us good. She cheered up and we ate our rations.

There was little enough to do in our cramped quarters. Every eight hours she would go for our tagged rations, I would grumble about the shortage and tampering, we'd have some tennis and then eat. The rest of the time passed somehow watching the ads come and go—all Schocken—on the walls. Well enough, I thought. Schocken's on the Moon and I won't be kept from him

there. Things weren't so crowded. Moon to Schocken to Kathy—a twinge of feeling. I could have asked casually what Hester had heard about Jack O'Shea, but I didn't. I was afraid I might not like what she had heard.

A drab service announcement at last interrupted the parade of ads: COOKS TO THE GALLEY (the *David Ricardo* was a British ship) FOR FINAL LIQUID FEEDING. THIS IS H-8 AND NO FURTHER SOLID OR LIQUID FOOD SHOULD BE CONSUMED UNTIL TOUCHDOWN.

Hester smiled and went out with our tray.

As usual, it was ten minutes before she returned. We were getting some pull from the Moon by then, enough to unsettle my stomach. I burped miserably while waiting.

SHE came back with two Coffiest bulbs and reproached me gaily: "Why, Mitch, you haven't set up the tennis court!"

"Didn't feel like it." I put out my hand for my bulb. She didn't give it to me. "Well?"

"Just one set?" she coaxed.

"You heard me," I snapped. "Let's not forget who's who around here." I wouldn't have said it if it hadn't been Coffiest, I suppose. The Starrzelius-red bulb kicked things off in me—nagging ghosts of withdrawal symptoms.

She stiffened. "I'm sorry, Mr. Courtenay." And then she clutched at her middle and threw up, violently, her face distorted. Astounded, I snapped the air regenerator switch to "Blast" and grabbed her. She was moaning with pain.

"Hester," I said, "what is it?"

"Don't drink it," she croaked, her hand kneading her belly. "The Coffiest. Poison. Your rations. I've been tasting them." Her nails tore first the nylon of her midriff and then her skin as she clawed at the pain.

"Send a doctor!" I was yelling into the compartment mike. "Woman's dying here!"

The chief steward's voice answered me: "Ship's doctor'll be there right away, sir."

Hester's contorted face began to relax, frightening me terribly. She said softly: "Bitch Kathy. Running out on you. Mitch and bitch. Funny. You're too good for her. She wouldn't have. My life. Yours." There was another spasm across her face. "Wife versus secretary. A laugh. It always was. You never even kissed me—"

I didn't get a chance to. She was gone while the ship's doctor was still hauling himself briskly in along the handline. His face fell. We towed her to the lazarette and he put her in a cardiac-node exciter that started her heart going again. Her chest began to

rise and fall and she opened her eyes.

"Where are you?" asked the doctor, loudly and clearly. She moved her head slightly and a pulse of hope shot through me.

"Response?" I whispered to the doctor.

"Random," he said with professional coldness. He was right. There were more slight head-movements and a nervous flutter of the eyelids, which were working independently. "Who are you?" brought a wrinkle between her eyes and a tremor of the lip, but no more.

Gently enough, the doctor began to explain to me: "I'm going to turn it off. Irreversible clinical death has occurred. It's often hard for a person with emotional ties to believe—"

I watched her eyelids flutter, one with a two-four beat, the other with a three-four beat. "Turn it off," I said hoarsely. He cut the current and withdrew the needle.

"There was nausea?" he asked. I nodded. "Her first space flight?" I nodded. "Abdominal pain?" I nodded. "No previous distress?" I shook my head. "History of vertigo?" I shrugged; I didn't know. He was driving at something. He kept asking, and the answers he wanted were as obvious as a magician's forced card. Allergies, easy bleeding, headaches, painful

menses—at last he said decisively: "I believe it's Fleischman's Disease. It stems from some derangement of function in the adrenocorticotrophic bodies under free flight, we think. It kicks off a chain reaction of tissue-incompatibilities which affects the cerebrospinal fluid—"

I reached for the bulb and then remembered. "Have one with me," I said.

He nodded and, with no stalling, drank from one of the nipples of a twin-valve social flask. I saw the level go down—Moon-pull was strong enough for there to be a level—and saw his Adam's apple work. "Not too much," he cautioned me. "Touchdown's soon."

I stalled with conversation for a few minutes, watching him, and then swallowed half a pint of hundred proof. I could hardly tow myself back to the compartment. I threw up and worked the air regenerator button in time to get most of it.

I was fuzzily glad the stuff had stayed down long enough for the alcohol molecules to be picked out of the fluid and sent wandering through my body, bringing numbness to my limbs and forgetfulness to my brain.

HANGOVER, grief, fear and the maddening red tape of Moon debarkation. I must have

acted pretty stupid. A couple of times I heard the crewmen say to port officials something like: "Take it easy on the guy. He lost his girl in flight."

The line I took in the cramped receiving room of the endless questionnaires was that I didn't know anything about the mission. I was Groby, a 6, and the best thing to do would be to send me to Fowler Schocken. I understood that we had been supposed to report to him. They pooh-poohed that possibility and set me to wait on a bench while queries were sent to the Schocken branch in Luna City.

I waited, watched and tried to think. It wasn't easy. The busy crowds in Receiving were made up of people going from one place to another place to do specified things. I didn't fit in the pattern; I was a sore thumb. They were going to get me . . .

A tube popped and blinked at the desk yards away. I read between halfclosed eyes: S-C-H-O-C-K-E-N T-O R-C-V-N-G R-E Q-U-E-R-Y N-O M-I-S-S-I-O-N D-U-E T-H-I-S F-L-I-G-H-T N-O G-R-O-B-Y E-M-P-L-O-Y-E-D B-Y U-S F-O-W-L-E-R S-C-H-O-C-K-E-N U-N-Q-U-E-R-I-E-D B-U-T I-M-P-O-S-S-I-B-L-E A-N-Y U-N-D-E-R S-T-A-R C-L-A-S-S P-E-R-S-O-N-N-E-L A-S-S-I-G-N-E-D R-E-P-O-R-T H-I-M A-C-T A-T D-I-S-C-R-E-

T-I-O-N O-B-V-I-O-U-S-L-Y N-O-T O-U-R B-A-B-Y E-N-D

They were glancing at me from the desk and talking in low tones. In only a moment they would be beckoning the Burns Detective guards.

I got up from the bench and sauntered into the crowd, with only one alternative left and that a frightening one. I made the casual gestures that, by their order and timing, constitute the Grand Hailing Sign of Distress of the Connies.

A Burns guard shouldered his way through the crowd and put the arm on me. "Are you going to make trouble?" he growled.

"No," I said thickly. "Lead the way."

He gestured confidentially at the desk and they waved back, with grins. He marched me, with his nightstick in the small of my back, through the startled crowd. Numbly I let him take me from the receiving dome down a tunnel-like shopping street.

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Readings by Appointment Only

blinked and twinkled at me from the shopfronts as new arrivals shuffled up and down, gaping.

"Hold it," growled the guard. We stepped in front of the *Warren Astron* sign. He muttered: "Twist the nightstick away from me. Hit me over the head with it. Fire one charge at the streetlight. Duck into Astron's and give him the grip. Good luck and try not to break my skull."

"You're — you're —" I stammered.

"Yeah. I wish I hadn't seen the hailing sign. This is going to cost me two stripes and a raise. Get moving."

He surrendered the nightstick and I tried not to make it too easy or too hard when I clouted him. The buckshot charge boomed out of the stick's muzzle, shattered the light overhead and brought forth shrieks of dismay from the strollers. It was thunderous in the vaulted street. I

darted through the chaste white Adams door of Astron's in the sudden darkness and blinked at a tall, thin man with a goatee.

"What's the meaning of this?" he demanded. "I read by appointment—" I took his arm in the grip. "Refuge?" he asked, abruptly, shedding a fussy professional manner.

"Yes. Fast."

He led me through his parlor into a small, high observatory with a transparent dome, a refracting telescope, Hindu star maps, clocks and desks. One of these desks he heaved at and it turned back on hinges. There was a pit and handholds. "Down you go," he said.

Down I went, into darkness.

IT was some six feet deep and six by four in area. It had a rough, unfinished feel. A pick and shovel leaned against one wall, and a couple of buckets filled with Moon rock. Obviously work in progress.

I inverted one of the buckets and sat down on it in the dark. After five hundred and seventy-six counted pulse-beats, I sat on the floor, tried to brush Moon rock out of the way and lie down. I heard voices directly overhead. One was the primly professional voice of Astron. The other was the petulant voice of a woman. They seemed to be seated at the

desk directly above me.

"—really seems excessive, Doctor."

"As Madam wishes. If you will excuse me, I shall return to my ephemeris—"

"But, Dr. Astron, I wasn't implying—"

"Madam will forgive me for jumping to the conclusion that she was unwilling to grant me my customary honorarium. That is correct. Now, please, the birth date and hour?"

She mumbled them, and I wondered briefly about the problem Astron must have with women who shaded their years.

"So . . . Venus in the hours of Mars . . . Mercury ascendant in the trine . . ."

"What's that?" she asked with shrill suspicion. "I know quite a bit about the Great Art and I never heard that before."

Blandly: "Madam must realize that a Moon observatory makes possible many things of which she has never heard before. It is possible by Lunar observations to refine the Great Art to a point unattainable in the days when observations were made perforce through the thick and muddled air of Earth."

"Of course. Please go on, Dr. Astron. Will I be able to look through your telescope and see my planets?"

"Later, Madam. So . . . Mer-

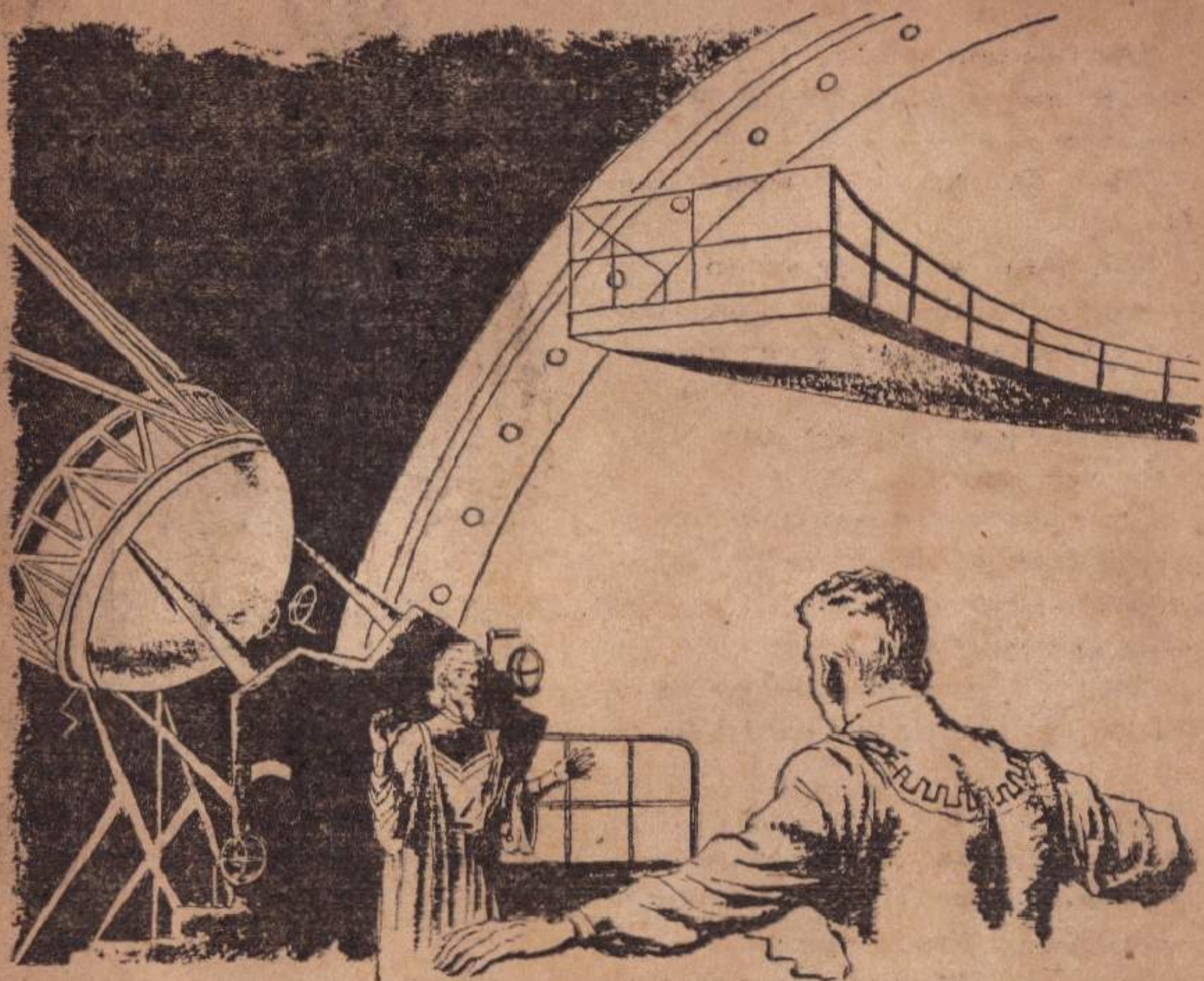


cury ascendant in the trine, the planet of strife and chicanery, yet quartered with Jupiter, the giver of fortune, so . . ."

The "reading" lasted perhaps half an hour, and there were two more like it that followed, and then there was silence. I actually dozed off until a voice called me. The desk had been heaved back again and Astron's head was silhouetted against the opening.

I climbed out stiffly.

"You're Groby," he stated.



"Yes."

"We got a report on you by courier aboard the *Ricardo*." I noticed that his hand was in his pocket. "You turn up in Chlor-ella, you're a natural-born copy-smith, you're transferred to New York, you get kidnapped in front of the Met—in earnest or by pre-arrangement—you kill a girl and disappear, and now you're on the Moon. God knows what you're up to. It's too much for me. A Central Committee member will

be here shortly to try and figure you out. Is there anything you'd care to say? Like confessing that you're an *agent provocateur*?"

I said nothing.

"Very well." Somewhere a door opened and closed. "That will be the Central Committee member."

And my wife Kathy walked into the observatory.

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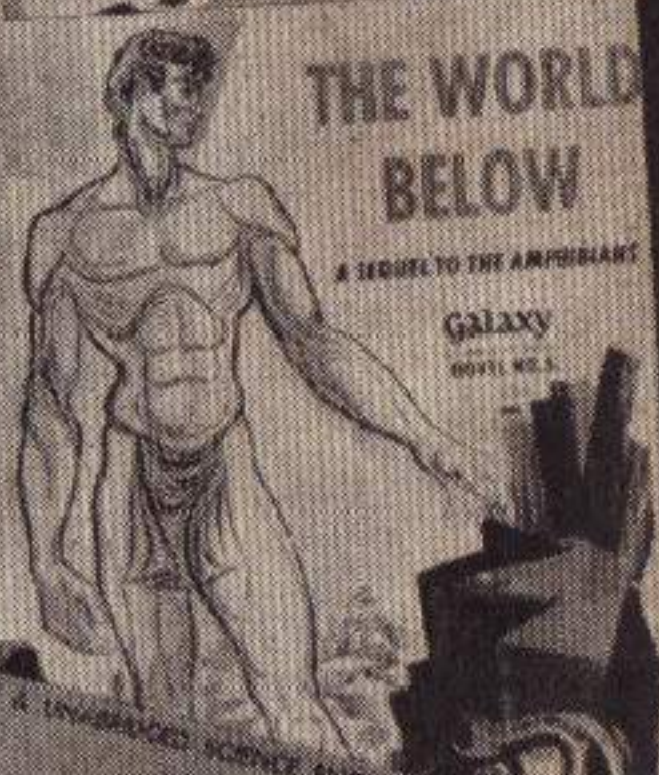
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